

ROLE AND MEMBRANE LOCATION OF HIV GP41 HAIRPIN IN FUSION
(SUPPLEMENTARY)

By

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A DISSERTATION

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APPENDIX 1 (Chapter 3-Project 1): Quantitative similarity of HIV gp160 V513E-dominant reduction of fusion and infection with fusion by the gp41 ectodomain hairpin supports an important fusion role for the final trimer-of-hairpins structure.

Table Apx. 1. 1: Dominance effect of V2E on different percent fusion of WT:V2E at lipid:protein 100:1.

Time (s)	FPHM:V2E (100:0)	FPHM:V2E (0:100)	FPHM : V2E (1:1)	FPHM:V2E (3:1)	FPHM:V2E (9:1)	FPHM:V2E (19:1)
1	8.45503	8.21003	0.40271	0.15693	7.90686	17.05376
2	11.94439	8.33196	0.73882	0.59428	9.70238	23.5937
3	15.37013	8.13064	1.15097	1.92534	10.03594	35.59521
4	17.98476	8.65965	1.82369	3.38044	11.64306	40.52508
5	20.81269	8.90019	2.27807	3.79532	13.42182	44.39613
6	23.57381	9.00974	2.77657	4.68245	15.42862	46.83371
7	25.96567	9.49334	3.36964	5.11341	16.76966	48.61124
8	28.35529	9.6383	4.09627	5.41357	17.59507	50.11598
9	30.29027	10.00171	4.95439	6.04146	18.59348	50.83043
10	32.45311	10.37466	5.29221	6.88164	19.74725	51.99064
11	34.27967	10.89002	5.77303	7.24775	20.66912	52.47393
12	35.82813	11.10006	6.0233	7.70684	21.08307	53.38122
13	37.40757	11.38712	6.38928	7.92844	21.62882	53.81374
14	38.97353	11.86294	6.4128	8.2158	21.853	54.31816
15	40.6744	11.94375	6.32577	8.4712	23.5516	55.08086
16	41.85466	12.37449	6.34671	8.75309	24.37588	55.75636
17	43.39095	12.72267	6.55956	8.93011	25.90532	56.15624
18	44.66911	12.98146	6.68007	9.44584	26.95469	56.86028
19	45.88544	13.29502	6.98785	9.70069	28.22825	57.14426
20	46.8602	13.1634	7.14526	9.78034	29.4239	57.50882
21	47.78779	13.72464	7.51261	10.38759	29.85869	57.71317
22	48.62824	13.80847	7.62848	10.49866	30.76856	58.31709
23	49.6218	13.95899	7.90416	10.88066	31.31906	58.39041
24	50.87135	14.29891	8.05968	11.0122	32.14764	58.60753
25	51.70577	14.44148	8.32129	11.13514	33.64198	59.11164
26	53.01148	14.57834	8.63199	11.45156	33.84262	59.14175
27	54.04785	14.87475	8.66581	11.66695	34.14833	59.19804
28	55.41481	15.02463	9.0438	11.96674	33.964	59.52523
29	56.36475	15.04591	9.24979	11.93659	34.34239	59.92873
30	57.49831	15.09862	9.51122	12.32626	34.67482	59.80906
31	58.2055	15.48585	9.55293	12.34198	34.79031	60.44876

32	58.95762	15.40885	9.7833	12.55353	35.20902	60.02413
33	59.49821	15.19038	9.93607	13.02267	35.04733	60.68166
34	60.27953	15.55142	10.03924	12.85313	34.22826	60.89642
35	60.75686	15.31184	10.28265	13.3537	34.43569	61.16432
36	61.55581	15.3628	10.4332	13.50222	34.89855	61.24489
37	61.7807	15.39551	10.38616	13.5605	34.46354	61.35322
38	62.45856	15.58857	10.65275	13.81809	35.07337	61.77044
39	63.02517	15.55825	10.93718	13.646	35.90218	61.99387
40	63.54412	15.56968	11.11039	13.98835	36.50499	62.32342
41	64.16144	15.48394	11.1775	13.89208	37.10576	62.5877
42	64.8885	15.34375	11.51001	14.17049	37.98439	62.59053
43	65.51469	15.35185	11.37972	14.35756	38.38656	63.2427
44	66.10553	15.37185	11.7608	14.79144	39.60894	63.34945
45	66.72937	15.23135	12.01605	15.01432	40.23847	63.67679
46	67.6443	15.29755	12.22359	14.92097	41.29191	63.76431
47	67.95527	15.31216	12.2078	15.12503	41.53852	64.20502
48	68.43721	15.08988	12.45	15.47342	41.83517	64.16844
49	68.84632	15.37154	12.7262	15.3079	41.62706	64.45747
50	69.46861	14.86888	13.04102	15.33128	42.03127	64.61152
51	69.94784	15.09004	13.09183	15.3353	42.04328	64.4972
52	70.72952	15.47902	13.52407	15.96356	42.32249	65.0084
53	71.14726	15.45108	13.38468	15.49041	42.86914	64.80389
54	71.48672	15.2893	13.59101	15.67967	43.41284	65.06974
55	72.03724	15.22658	13.89519	15.85706	44.13998	65.00225
56	72.40213	15.22753	13.93502	15.94256	44.61756	65.29633
57	73.01851	15.18594	14.98076	16.36876	45.28604	65.46063
58	73.33788	15.15815	16.84307	16.25714	46.5537	65.30137
59	73.78104	15.11592	15.5565	16.4919	47.05959	65.52244
60	74.29006	15.05511	15.12237	16.36347	48.0091	65.76637
61	74.41243	15.42949	15.33729	16.89143	48.94909	65.47971
62	74.63662	15.2985	16.5437	16.7915	50.06707	65.65331
63	75.25607	15.3247	16.65579	16.78018	51.07229	66.12635
64	75.74771	15.17419	16.87105	17.08928	51.78651	66.16404
65	76.06223	15.78925	16.81389	17.41154	53.22831	66.36177
66	76.23438	15.79195	16.96306	17.48261	54.51999	66.16104
67	76.75061	15.88515	16.98778	17.77107	55.79829	66.46868
68	77.28908	15.94183	17.33779	17.73289	56.64001	66.63755
69	77.66177	15.8807	17.30707	18.35439	58.32027	66.81021
70	77.89576	18.31937	17.51838	18.41376	59.37349	66.73437
71	78.00632	18.50735	17.53589	18.3575	60.32027	67.162
72	78.30392	18.44178	17.51357	18.29995	60.17172	67.26481
73	78.51344	18.57578	17.40354	18.79083	60.14387	67.28515
74	78.9287	18.31238	17.56593	19.12003	60.09224	67.56235

75	79.07153	18.09805	17.4928	18.87834	60.33295	67.48414
76	79.53385	18.48226	17.66343	19.095	60.19912	67.71088
77	79.92664	18.53354	17.65364	19.44211	60.77295	68.04958
78	80.05576	18.34032	17.87869	19.54058	60.56144	67.99818
79	80.37488	18.29285	17.94083	19.71504	61.20229	68.43747
80	80.70773	18.77487	17.99713	19.86521	60.8325	68.47784
81	81.127	18.57292	18.14699	19.83763	61.2075	68.48951
82	81.55905	18.8071	18.26921	19.81242	61.32707	68.64813
83	81.65955	18.79964	18.20089	20.14125	61.01366	68.71262
84	82.0242	19.18893	18.19076	20.53787	60.95252	68.57686
85	82.04253	19.14384	18.4134	20.55267	61.13595	69.31796
86	82.34499	19.48742	18.30217	21.119	61.3676	69.26403
87	82.48936	19.46836	18.32534	21.06729	61.43463	69.17841
88	82.75658	19.41867	18.69561	21.09579	62.06145	69.14151
89	83.06164	19.63967	18.67398	21.20285	62.12644	69.27286
90	83.14653	19.77367	18.50644	21.58065	62.09926	69.72761
91	83.22646	19.88179	18.88529	22.01946	61.77748	69.95231
92	83.44615	20.07295	18.95103	22.13693	62.05397	69.70538
93	83.75097	20.37445	18.90348	22.17968	62.10719	70.05038
94	84.01311	20.40239	19.05557	22.73505	62.43101	70.15493
95	84.2743	20.59244	18.96253	22.68554	62.59836	70.10873
96	84.27572	20.66547	19.16629	22.83114	62.73106	70.30882
97	84.5492	20.59085	19.23907	22.65686	62.84247	70.63979
98	84.46171	21.13558	19.40284	22.72262	62.93396	70.85881
99	84.51373	20.89743	19.49828	23.00761	63.1706	71.13601
100	84.8519	21.03381	19.66032	23.00286	63.08998	71.05118
101	84.79514	21.18718	19.86837	22.92102	63.46453	71.07877
102	84.90037	21.25053	19.79181	22.54542	63.52386	71.35661
103	85.29529	21.22893	20.00999	22.94495	63.5225	71.21801
104	85.33313	21.57806	20.26456	22.90641	64.10561	71.24465
105	85.20425	21.57282	20.28499	22.87206	63.89682	71.89981
106	85.45137	21.48582	20.39536	22.52989	63.847	71.79969
107	85.90304	21.61712	20.50196	22.84722	64.0379	71.78944
108	86.04611	21.55488	20.71516	22.9539	64.47495	72.49679
109	86.34526	21.8305	20.87103	23.26155	64.07843	72.17181
110	86.37955	21.931	20.99926	23.10827	64.02409	72.62751
111	86.66923	21.98308	21.10191	23.27014	64.29424	72.51603
112	86.88561	22.09263	21.27185	23.65378	64.04968	72.499
113	87.02277	22.16995	21.25176	23.5491	64.24986	72.54362
114	87.36803	22.00673	21.32094	23.73745	64.21883	72.70241
115	87.72629	22.1447	21.38411	23.8551	64.6586	72.81373
116	87.58913	22.18027	21.48934	24.07706	64.56394	72.86387
117	87.83153	22.10422	21.39939	24.06409	64.64433	73.08037

118	88.13776	22.31554	21.4502	24.06537	64.66811	73.11206
119	87.97223	22.43668	21.51543	24.04235	64.1946	73.52408
120	88.18861	22.33252	21.67044	24.22376	64.5071	73.47236
121	88.35651	22.70785	21.45844	24.48574	64.0302	73.88075
122	88.19688	22.47811	21.40643	24.62421	64.32527	73.81862
123	88.31749	22.58862	21.62975	24.55169	63.86218	73.65448
124	88.56934	22.48732	21.59456	24.86353	63.94483	74.11806
125	88.52795	22.33665	21.48453	24.89989	64.20955	74.03796
126	88.7798	22.49701	21.47852	24.97479	64.01073	74.07517
127	88.87912	22.64641	21.63731	24.94355	64.33885	74.38659
128	89.39228	22.82502	21.46531	25.12277	63.95819	74.48908
129	89.29533	22.812	21.37656	25.19602	63.73355	74.41623
130	89.24567	22.70023	21.32214	25.46183	63.86263	74.80239
131	89.28232	22.99061	21.18293	25.56085	63.9591	74.75398
132	89.67015	22.82867	21.46204	25.50495	63.51231	74.83172
133	89.89362	23.07635	21.31802	25.81259	63.50846	75.0684
134	90.14665	22.83899	21.32695	25.73422	63.63142	75.44636
135	90.05442	22.91965	21.33965	25.90923	63.4369	75.03087
136	90.30509	22.91139	21.54976	26.07183	63.22495	75.5017
137	90.04969	23.27751	21.44265	26.23789	63.07413	75.48231
138	90.57349	23.33768	21.4605	26.51703	63.47291	75.29278
139	90.57468	23.54693	21.59491	26.03437	63.5139	75.46055
140	90.64798	23.40627	21.61448	26.13522	62.95524	75.91088
141	90.65508	23.5871	21.46582	26.43556	62.96725	75.84387
142	90.59596	23.51391	21.53689	26.1555	62.93079	75.94273
143	90.9424	23.57599	21.67988	26.25269	62.90248	76.24832
144	91.04409	23.80779	21.6016	26.21286	63.10085	75.75352
145	91.22854	23.71459	21.56538	26.4573	62.73559	75.95298
146	91.20726	21.84828	21.65705	25.98432	62.53948	76.01874
147	91.13395	22.45652	21.83557	26.43501	62.64908	76.54807
148	91.37516	22.83058	21.96466	26.19879	62.51389	76.24958
149	91.7547	22.57337	21.85943	26.16956	62.62734	76.17831
150	91.68849	22.86963	21.75215	26.58591	62.31348	76.73098
151	91.50404	23.24655	21.81532	26.51027	62.75212	76.48263
152	91.79845	23.33308	21.79626	25.88457	62.37644	76.38266
153	92.03138	23.57599	21.90544	26.31955	62.67648	76.84088
154	92.02429	23.70364	21.99161	26.05136	62.93418	76.7335
155	92.0905	23.91131	21.97341	26.26694	62.57413	77.20906
156	92.37428	23.5671	22.11503	26.48579	62.57503	77.26283
157	92.09169	23.82557	22.13065	26.549	62.5225	77.50724
158	92.38965	24.17089	22.34471	26.51192	62.29695	77.30588
159	92.36127	23.85605	22.25648	26.25451	62.13934	77.66634
160	92.52681	24.35585	22.31724	26.33873	62.05714	77.59428

161	92.65096	24.09151	22.31467	26.10544	62.18939	77.46813
162	92.88271	24.23202	22.20481	26.11951	62.36398	77.84388
163	92.78339	24.41936	22.25579	26.14709	62.15769	77.5774
164	92.90754	24.42015	22.42831	26.17011	62.30805	77.90932
165	93.06598	24.41968	22.5162	25.8906	62.54877	77.69235
166	93.10381	24.17946	22.45165	26.04588	62.0705	78.03058
167	93.15939	24.42158	22.56426	26.21779	62.21928	78.37022
168	93.25752	24.45429	22.7972	26.06835	62.52816	78.23083
169	93.25398	24.52955	22.86191	25.65493	62.37734	78.07757
170	93.34975	24.63401	22.86363	25.88914	62.50619	78.34499
171	93.54958	24.78595	22.9038	25.75377	62.48196	78.74629
172	93.92676	24.8285	23.20008	26.01629	62.25121	78.61463
173	93.71748	24.97203	23.38942	25.75231	62.27657	78.67754
174	93.74231	24.65989	23.51078	26.04077	62.33002	78.83065
175	94.35597	25.09952	23.75677	25.79579	62.54084	78.60958
176	94.17743	24.94504	23.59009	25.73513	62.31394	78.76805
177	93.98233	24.72848	23.87092	25.68782	62.25982	78.76489
178	93.96105	25.20145	23.83127	25.6363	62.62304	79.22359
179	94.12895	25.13619	23.85564	25.98395	62.72268	79.01907
180	94.26492	24.93329	23.76243	25.79231	62.96249	78.95427
181	94.29921	25.15239	23.95967	25.59574	62.91675	78.96941
182	94.13486	25.36307	24.02988	25.58825	63.00914	79.27042
183	93.90193	25.09285	24.07845	25.70499	62.94211	79.35036
184	94.03199	25.30052	23.91504	25.95892	62.75234	79.59051
185	94.31813	25.47135	24.32856	25.45599	63.01842	79.19867
186	94.0379	25.39181	24.4137	25.52851	63.13165	79.65374
187	94.03199	25.45675	24.26642	25.72764	63.58885	79.39136
188	93.94804	25.72125	24.55034	25.60981	63.70751	79.73715
189	93.89956	25.61265	24.45181	25.7671	63.50959	79.51592
190	93.90311	25.41959	24.61454	25.707	63.97382	79.7895
191	94.01662	25.8597	24.68218	26.03547	64.41517	80.00426
192	93.99297	25.82382	24.67994	25.89809	64.0456	79.90256
193	94.06273	25.91034	24.8528	25.62881	64.78564	79.76159
194	94.21053	25.64219	24.92456	25.89042	64.63731	79.87197
195	93.77896	25.83795	25.06961	25.88749	64.77432	79.94639
196	93.95277	26.14341	25.28761	25.90302	65.45751	79.93141
197	94.16678	26.22661	25.38048	25.669	65.3307	80.34753
198	94.69531	26.21629	25.42185	25.64817	65.37305	80.03895
199	94.11831	26.32854	25.57771	25.78428	65.70865	80.06528
200	94.19398	26.42475	25.47335	26.06927	65.65498	80.2176
201	94.39499	26.36489	25.72414	26.18125	65.74307	80.1632
202	94.35006	26.44158	25.68088	26.49219	65.66879	80.48203
203	94.5688	26.76261	25.78456	26.47556	65.68034	80.48014

204	94.25665	26.73562	25.85082	26.6219	65.77817	80.78367
205	94.55816	26.81278	26.10848	26.5585	65.69619	80.72612
206	94.61136	26.79865	25.98248	27.31739	65.91268	80.73054
207	94.7166	26.83929	26.09973	27.26258	65.94325	80.9669
208	94.62437	26.96646	26.03278	27.1484	66.20571	81.07065
209	94.6965	26.94185	26.19603	27.503	66.00145	81.00837
210	94.94243	26.99202	26.22349	27.90436	65.71114	80.97336
211	94.91879	26.671	26.25902	28.25274	66.13301	81.26665
212	94.93889	26.95614	26.1768	28.69887	65.54243	81.30891
213	94.99091	27.19223	26.4784	28.86511	65.78609	81.48267
214	95.10442	27.40148	26.54003	29.00779	65.73492	81.36015
215	95.13635	27.19001	26.49814	29.52516	65.26096	81.52351
216	95.21675	27.03934	26.4887	29.84833	65.11965	81.72975
217	95.02284	27.53993	26.50535	29.81874	65.16019	81.4844
218	95.0855	27.64503	26.81811	30.49779	65.09723	81.42433
219	95.04885	27.5974	26.75374	30.24349	64.92989	81.48267
220	95.27114	27.48515	26.98891	30.74935	65.39434	81.67141
221	95.18601	27.74379	27.08607	31.0263	64.88958	81.98267
222	95.31962	27.53691	27.05432	30.99451	64.98174	82.02446
223	95.40948	27.71553	27.28279	31.06996	64.58999	82.2624
224	95.40475	27.82904	27.19233	31.00255	64.13414	81.63325
225	95.30779	27.99797	27.13585	30.8575	64.34542	82.00349
226	95.43431	27.98432	27.30373	30.90061	64.61988	82.0921
227	95.46623	27.7595	27.42166	31.14231	64.30353	82.05789
228	95.44732	28.17452	27.36244	30.485	64.19687	82.27927
229	95.36218	28.02226	27.6704	30.96145	64.41426	82.22724
230	95.34681	28.31201	27.53376	30.97752	64.13935	82.24931
231	95.76893	28.06656	27.64379	30.80159	64.14252	82.31128
232	95.71217	28.02544	27.59899	30.30816	64.14456	82.30119
233	95.53008	28.23787	27.8908	30.46655	64.05058	82.45051
234	95.49698	28.34043	27.69992	30.62914	63.88799	82.41235
235	95.73227	28.27772	27.85081	30.19599	63.79333	82.2911
236	95.27587	28.30884	28.05577	30.61726	63.51661	82.67316
237	95.7642	28.38314	27.94591	30.41083	63.50167	82.63263
238	95.73227	28.48571	28.0465	30.31967	63.61467	82.65896
239	95.68616	28.69877	28.09439	30.47586	63.90294	82.74585
240	95.57265	28.85008	27.99037	30.15707	63.65701	82.58312
241	95.83396	28.7545	28.17782	30.44134	63.56892	82.79078
242	95.92264	28.84658	28.00049	30.19617	63.89841	82.86789
243	95.62467	28.85992	28.3009	29.97731	63.847	82.81049
244	95.54782	28.96026	28.21404	30.16036	63.67173	82.83557
245	95.68261	29.08696	28.30982	30.0239	63.59927	82.51374
246	95.73345	29.21334	28.36698	29.82842	63.37689	82.7419

247	95.83632	29.44498	28.44835	29.72831	63.64569	82.87562
248	96.00659	29.38465	28.43805	30.04289	63.4009	83.00933
249	95.96875	29.4418	28.43136	29.89492	63.27499	82.96959
250	95.87179	29.72552	28.54602	29.86825	63.44007	82.94862
251	95.72754	29.87524	28.35394	29.90588	63.6321	82.75105
252	95.70508	29.99018	28.49229	29.85674	64.0216	83.18152
253	95.80085	29.95176	28.37402	29.67131	63.32345	82.90069
254	95.71454	30.34122	28.22794	29.67478	63.3273	82.9338
255	96.12956	30.00209	28.43702	29.73507	63.28541	83.20769
256	95.98885	30.39266	28.47444	29.97749	63.73083	83.14588
257	95.79139	30.5346	28.54963	29.8297	63.86082	83.02715
258	95.75474	30.28232	28.62087	29.69743	63.26639	83.38745
259	95.95101	30.34709	28.4844	29.82641	63.52431	83.08517
260	95.75356	30.55111	28.53366	29.8487	63.82209	83.12207
261	95.87889	30.33169	28.71511	30.07322	63.60538	83.51406
262	95.89071	30.6505	28.61486	30.13259	63.48242	83.34992
263	95.85051	30.70384	28.58138	29.82495	62.85561	83.71179
264	95.89308	30.89817	28.56267	30.21608	62.84768	83.3157
265	95.75356	30.95469	28.60336	30.19928	63.31915	83.46613
266	96.10591	30.80783	28.7503	30.17279	63.16177	83.562
267	95.91081	31.12934	28.70841	30.37374	62.86444	83.53787
268	95.8174	30.85499	28.67442	30.53615	63.05216	83.36711
269	96.03851	30.95025	28.8066	30.47477	63.25099	83.94217
270	96.11655	31.02677	28.76111	30.56775	63.53201	83.76793
271	95.93446	31.02614	28.67648	30.38635	63.01412	83.82154
272	95.95929	31.34494	28.92144	30.30816	63.18713	84.00997
273	95.84342	31.14236	28.9774	30.72432	63.33998	84.0188
274	95.94983	31.08536	28.68884	30.4269	63.35176	83.94106
275	96.25607	31.22206	28.97448	30.72432	63.472	84.16449
276	95.75237	31.29684	29.04314	30.84635	63.42354	84.04403
277	95.69325	31.16077	28.826	30.74661	63.32232	84.1328
278	95.63886	31.33478	29.03267	30.83996	63.44302	84.03898
279	96.05034	31.36527	29.01259	30.96948	62.95728	84.32422
280	96.07162	31.05313	28.8066	31.18451	63.47132	84.50303
281	95.95693	31.35907	29.24793	31.26251	63.55035	84.41426
282	96.05507	31.6366	29.29188	31.48046	63.84179	84.67475
283	95.95574	31.32208	29.14665	31.43223	63.59066	84.84283
284	96.06807	31.49768	29.08245	31.5855	63.55239	84.43838
285	95.98176	31.57786	29.28003	31.74189	63.87372	84.82596
286	96.38732	31.37559	29.21188	31.91069	63.972	84.92262
287	96.03496	31.49387	29.23471	31.86867	64.05534	84.70581
288	96.21232	31.52054	29.21068	31.81405	64.23152	84.72032
289	96.33175	31.60866	29.2469	32.08223	64.42196	84.954

290	96.03378	31.22111	29.38028	32.05702	64.32798	85.16844
291	96.21351	31.55531	29.28347	32.21413	64.41879	85.22111
292	96.41806	31.58992	29.15386	32.3654	64.63709	85.1604
293	96.16385	31.53292	29.3432	32.02359	64.19257	85.28292
294	96.45117	31.70185	29.43401	32.40413	64.44913	84.77377
295	96.29391	31.27763	29.46971	32.29177	64.69845	85.11862
296	96.09527	31.68709	29.57906	32.0614	64.31304	85.39267
297	96.49492	31.52721	29.53426	32.31169	65.0884	85.14527
298	96.44644	31.56722	29.38835	31.74408	64.68238	85.19336
299	96.39086	31.43433	29.36603	32.02797	64.9471	85.35072
300	96.66873	31.47307	29.4989	31.75303	65.22314	85.18106
301	96.3412	31.41639	29.22974	31.68945	64.87803	85.09402
302	96.26671	31.35749	29.38835	31.9675	65.16449	85.38037
303	96.71129	31.605	29.61545	31.93024	65.21159	85.10947
304	96.37431	31.50149	29.64961	31.9317	65.11716	85.21417
305	96.17685	31.40448	29.70403	31.93151	65.0139	85.27172
306	96.69947	31.4772	29.54267	32.09264	65.34089	85.64353
307	96.64508	31.52372	29.58284	31.82117	65.11422	85.51171
308	96.43816	31.36638	29.64275	31.89735	64.94347	85.50288
309	96.21942	31.66915	29.53941	31.59025	64.87622	85.34851
310	96.42515	31.39575	29.76497	31.64232	64.93713	85.64763
311	96.40032	31.2762	29.48001	31.57929	65.4745	85.51455
312	96.52802	31.20428	29.7066	31.80509	65.24533	85.40481
313	96.22297	31.56833	29.6079	31.30051	65.16879	85.55586
314	96.30337	31.57706	29.6527	30.19233	65.08116	85.53899
315	96.12128	31.67613	29.65287	30.57141	64.81757	85.61279
316	96.28681	31.4872	29.59434	30.43184	64.92332	85.44785
317	96.10591	31.42893	29.64824	30.48134	64.59066	85.77204
318	96.38614	31.48021	29.61871	30.49267	64.42649	85.6489
319	96.27736	31.65629	29.71347	30.59224	64.5422	85.87312
320	96.08817	31.4556	29.73544	30.69472	64.42196	85.7074
321	96.19813	30.58413	29.58593	30.57342	64.33183	85.81998
322	95.97585	30.62779	29.71175	30.89294	64.4591	85.80941
323	96.12719	30.68511	29.766	30.69911	64.34451	86.08062
324	96.01132	31.49815	29.56361	30.96254	64.21385	85.78907
325	96.04679	32.00446	29.64978	30.97953	64.0225	86.0833
326	95.92264	31.80823	29.6158	31.13354	64.29651	85.89362
327	96.09527	31.87205	29.5631	30.94482	63.54333	86.0792
328	95.71808	31.96096	29.78402	30.72797	63.59225	86.2342
329	96.01013	31.81807	29.80462	31.0959	64.29854	86.18343
330	95.92382	31.63914	29.8417	30.85823	64.20479	86.19037
331	95.92264	31.64295	29.77063	30.93952	64.18917	86.20172
332	95.87652	31.59405	29.6812	31.17556	63.45343	86.23089

333	96.29864	31.32907	29.76874	31.12203	63.23581	86.36965
334	96.13665	31.61151	29.67347	31.05115	63.50552	86.29255
335	96.14493	31.51117	29.60275	31.41104	63.38482	86.38227
336	96.15675	31.41766	29.75896	30.99652	63.79333	86.59151
337	96.00777	31.51641	29.76531	31.1898	63.4985	86.32818
338	96.02314	31.39972	29.55383	31.16587	63.62961	86.30406
339	96.29154	31.38352	29.78162	31.26197	63.66924	86.58504
340	96.09881	31.25381	29.89886	31.57984	63.52386	86.64386
341	96.36012	31.24794	29.59296	31.42894	63.83817	86.78009
342	96.11419	31.31541	29.75003	31.46457	63.68305	86.67303
343	96.62261	31.48402	29.6079	31.365	63.78382	86.75266
344	96.13547	31.48672	29.82659	31.25904	63.63142	86.94944
345	96.30928	31.68883	29.76668	31.32645	63.69981	87.20299
346	96.38141	31.28969	29.70626	32.09118	63.48355	86.57038
347	96.2809	31.41544	29.80565	31.74134	63.70072	86.70693
348	96.27499	31.27445	29.74866	31.92	63.56688	87.0245
349	96.35303	31.27445	29.73407	32.24957	63.24872	87.39331
350	96.56704	31.65073	29.8635	32.17504	63.75937	86.93304
351	96.52448	31.38114	29.63536	32.16937	63.4283	87.01677
352	96.49019	31.24984	29.82384	32.08643	63.66992	87.08615
353	96.25962	31.3451	29.68892	32.30383	63.68147	87.38432
354	96.39086	31.40639	29.85818	32.40358	63.94053	87.21024
355	96.61907	31.44417	29.80805	32.55667	63.67717	87.22948
356	96.24543	31.35749	29.7284	32.36393	63.57277	87.16846
357	96.30928	31.18078	30.06623	32.78704	63.67264	87.50148
358	96.36958	31.26254	29.93027	32.80896	63.99125	87.6128
359	96.04088	31.66851	29.91671	32.88697	63.79084	87.32377
360	96.31992	31.63326	29.99722	32.9721	64.24238	87.65112
361	96.36722	31.40353	29.99997	33.04846	64.19732	87.51551
362	96.2608	31.51228	29.83071	32.58389	64.62509	87.55036
363	96.21942	31.56515	30.1397	33.3108	64.24805	87.55178
364	96.02432	31.17713	29.82299	33.10546	64.32277	87.8356
365	95.93091	31.00629	30.0803	33.23316	64.27001	87.74005
366	95.84815	31.38686	30.07	33.49513	64.58817	87.80186
367	95.84223	31.26921	29.85646	33.46225	64.62622	88.09609
368	96.15675	31.15601	30.15051	33.43485	64.81847	87.73469
369	95.66606	31.12362	30.05575	33.4807	64.58183	88.25551
370	95.51116	31.1749	30.01919	33.49787	65.0875	87.91224
371	95.84815	31.08917	29.77647	33.59561	65.12712	87.57354
372	95.8647	31.13045	30.01095	33.72276	65.21091	87.95181
373	95.90608	30.87134	29.88598	33.68732	65.20933	87.6847
374	95.82686	30.93342	29.96289	33.78433	65.31847	87.87392
375	96.13665	31.00232	30.24767	34.079	65.37463	88.04485

376	95.91673	31.13458	29.97937	34.18185	65.55036	87.93415
377	95.96047	31.17887	29.96426	34.0969	65.37214	87.89789
378	95.78193	31.28509	29.96151	34.12979	65.22495	87.68865
379	96.03496	30.81006	30.0276	34.05671	65.36603	87.98225
380	95.92382	31.06361	29.99344	34.2405	65.38211	87.95923
381	95.91673	31.33669	30.03945	34.44237	65.78428	87.92958
382	96.12483	30.93659	29.88204	34.90913	65.34225	87.814
383	96.41451	31.21364	29.90744	34.63309	65.27477	88.0305
384	96.37549	30.95739	30.1251	35.11575	65.62418	88.40877
385	96.3684	31.09901	30.08923	34.79057	65.35199	88.26087
386	96.6439	31.12727	29.89216	35.32274	65.90702	88.08569
387	96.56468	30.89659	30.08013	35.14662	65.5755	87.83434
388	95.99003	30.92691	29.915	35.59147	65.64909	88.14324
389	96.07398	31.05646	30.01507	35.42084	65.51934	88.1229
390	96.0527	31.00312	30.05524	35.47473	65.89932	88.28547
391	96.47954	31.10235	30.13952	35.72794	65.61671	88.0439
392	96.51147	31.20983	29.8774	35.5257	65.61535	88.18613
393	96.59897	31.25508	30.13403	35.4972	65.66879	87.74478
394	96.64508	31.03471	30.29007	35.74054	64.73174	88.23469
395	96.75031	31.03916	30.26518	35.74748	65.30806	87.95733
396	96.83899	31.26286	30.08494	35.97803	65.42559	88.3252
397	97.02817	30.87515	30.18227	36.00873	65.2254	88.52593
398	96.97024	31.35082	30.03996	36.26156	65.0687	88.39158
399	96.87565	31.25588	30.0288	36.20658	64.79628	88.40026
400	97.13223	31.33526	30.15017	36.30541	65.09384	88.74305
401	97.10385	31.41829	30.20956	36.38579	65.57776	88.14072
402	97.44201	31.4221	30.06451	36.55039	64.78156	88.5048
403	97.49049	31.6266	29.96014	36.88526	65.18328	88.46964
404	97.23628	31.60104	30.0276	36.7835	65.00258	88.48115
405	97.28475	31.44052	30.20939	36.84287	64.87712	88.87566
406	97.13695	31.69169	30.1136	37.06045	65.04175	88.6855
407	97.33441	31.77568	29.97233	37.10266	64.62622	88.29335
408	97.21145	31.56182	30.18484	37.22743	65.0644	88.62732
409	97.23273	31.63485	30.0125	37.2773	64.60878	88.82079
410	97.12277	31.52086	30.08013	37.23145	64.73672	88.81701
411	97.19726	31.84236	30.07858	37.5232	64.76141	88.50669
412	97.52596	31.99986	30.18484	37.37687	64.90407	88.59767
413	96.81771	31.62374	30.14141	37.57746	64.39546	88.69938
414	96.80825	31.68185	30.27599	37.38271	64.57572	88.41823
415	96.64744	31.81886	30.25402	37.93461	64.57572	88.65255
416	96.87446	31.76647	30.26054	37.69566	64.31757	88.84996
417	96.95605	31.81521	30.34671	37.75156	64.6115	88.92344
418	97.05182	31.997	30.10948	38.22892	64.45819	88.94678

419	96.97378	32.06718	29.98537	38.42732	64.61988	88.71956
420	97.03409	32.11322	30.12837	38.00495	64.40566	88.86194
421	96.93595	31.97954	30.3601	38.29122	64.44279	88.85674
422	97.26111	32.07369	30.18999	38.36813	64.5071	88.96728
423	96.9324	32.30152	30.13815	38.21559	64.51345	88.94031
424	96.95841	31.77822	30.11858	38.46879	64.5447	88.70616
425	97.17361	32.48235	30.14021	38.62426	64.17219	88.78437
426	96.66754	32.20165	30.00958	38.78959	64.18532	88.94173
427	97.04828	31.89666	30.21814	38.91564	64.34542	88.90341
428	96.96905	31.96493	30.17077	38.87088	64.15905	89.31464
429	96.67227	32.24198	30.25385	39.14126	64.45004	89.28752
430	96.89102	31.86697	30.19789	39.34295	64.52228	89.09941
431	96.90284	32.14862	30.20956	39.00735	64.60357	89.18771
432	96.74558	32.28786	30.23067	39.17652	64.70095	89.37472
433	96.80707	31.98208	30.35581	39.04151	65.03451	89.31543
434	96.6368	31.99541	30.28904	39.31025	64.48084	89.38891
435	96.69238	32.24071	30.41315	39.16008	65.25824	89.04517
436	96.48191	32.01415	30.23823	39.31006	65.2802	89.01001
437	96.8248	31.91079	30.30895	39.40196	65.51752	89.25504
438	96.53866	32.14878	30.36113	39.64365	65.22472	89.39837
439	96.45826	31.85665	30.31994	39.85009	65.06621	89.51569
440	96.46299	32.06987	30.25162	39.82013	65.40068	89.40831
441	96.4559	32.14164	30.1203	39.74139	65.44098	89.51411
442	96.60724	32.25293	30.23874	39.07074	65.07074	89.598
443	96.48309	32.11766	30.30226	39.78322	65.31078	89.44378
444	96.6238	32.26389	30.30002	40.03277	65.76752	89.5518
445	96.47718	31.76139	30.41984	39.78962	65.54742	89.39033
446	96.60488	32.07003	30.34998	40.08173	65.26594	89.6043
447	96.53157	31.66803	30.31187	39.85666	65.34995	89.83972
448	96.46536	31.86935	30.16768	39.47247	65.40747	89.74022
449	96.62143	31.46783	30.30054	39.71928	65.55942	89.77602
450	96.67346	31.66438	30.11154	39.8837	65.6937	89.42802
451	97.03172	31.33272	30.27136	39.67562	66.0841	89.52326
452	97.13814	31.69487	30.28801	39.52034	65.49601	89.66138
453	96.86737	31.2627	30.32629	39.507	66.16993	89.92991
454	96.93004	31.37019	30.22226	39.65315	65.69529	89.58664
455	97.1606	31.55928	30.3014	39.69407	66.06078	89.55511
456	96.70065	31.56134	30.29573	39.32906	65.80036	89.45514
457	97.1677	31.48545	30.32148	39.61241	66.14751	89.48557
458	97.24337	31.48688	30.26672	39.38624	66.37486	89.71988
459	97.32496	31.41718	30.30535	39.53239	66.3264	89.65886
460	97.61582	31.07075	30.07653	39.32979	66.34475	89.66785
461	97.33796	31.26461	30.47752	39.39191	66.04606	89.36021

462	97.17243	31.26413	30.33745	39.54262	66.30172	89.97044
463	97.48576	31.30779	30.05146	39.63506	66.43374	89.55022
464	97.4964	30.96613	30.42499	39.45055	66.43261	89.67037
465	97.68204	31.0209	30.24389	39.72422	66.38664	89.43417
466	97.64775	31.05869	30.35375	39.65626	66.46522	89.69513
467	97.59099	30.96168	30.16974	39.56162	66.63188	89.53461
468	97.65839	30.72004	30.16613	39.91841	66.68668	89.88624
469	97.7518	31.01391	30.17197	39.65388	66.53768	89.56141
470	97.81092	30.65208	30.16836	39.75454	66.66834	90.20664
471	97.80855	30.68527	30.24767	40.06876	66.72246	90.84209
472	97.72342	30.6216	30.26243	39.86214	66.24624	90.76767
473	97.7719	30.68066	30.23102	39.94399	66.34044	90.51838
474	98.31698	30.49887	30.36251	40.09452	66.36014	90.12638
475	98.18219	30.57143	30.11892	40.33677	66.07618	90.20711
476	97.79555	30.51935	30.09901	40.30955	66.64343	90.30866
477	97.82274	30.35805	30.51288	40.66615	66.66653	90.05401
478	97.71278	30.42568	30.52644	40.37257	66.02024	90.11046
479	98.1479	30.22992	30.2063	40.47999	66.24103	90.34524
480	97.92325	30.30264	30.4334	40.46702	66.24828	90.07435
481	97.72697	30.26231	30.36388	40.47433	66.0884	89.86763
482	97.7447	30.18229	30.28148	40.47542	66.55036	89.88876
483	97.87595	29.92461	30.34517	41.09254	66.24398	89.87015
484	97.63947	29.85587	30.50653	40.70086	66.55965	89.84603
485	97.98709	29.60882	30.1639	40.66378	66.43714	89.92897
486	97.72815	29.76918	30.09627	40.81942	65.95321	89.90705
487	97.67967	30.01813	29.65356	40.69885	66.1663	89.77491
488	97.46684	29.67471	29.70849	41.14899	66.03089	89.63931
489	97.80146	29.48737	29.77115	40.94603	66.09135	89.88072
490	97.60045	29.61343	29.59623	40.87624	66.07867	89.54076
491	97.55197	29.51309	29.65665	41.29825	66.07844	89.38371
492	97.50113	29.43101	29.98572	41.09839	65.94914	89.93196
493	97.64657	29.38814	29.92873	41.28948	66.20253	89.65949
494	97.74707	29.27748	29.73922	41.43672	66.17423	89.88214
495	97.54606	29.03472	29.78694	41.16434	65.74533	89.76545
496	97.56143	29.29193	29.62541	41.37205	65.26707	89.99519
497	97.5437	29.28954	29.63948	41.58708	65.92604	89.89538
498	97.55434	29.23747	29.78127	41.63001	65.56938	89.78248
499	97.40181	29.11061	29.92495	41.47856	65.71635	90.0302
500	97.21972	28.96614	30.01593	41.36621	65.33433	89.82979
501	97.40063	28.99408	29.94692	41.52204	65.56757	89.86195
502	97.30131	29.03091	30.05816	41.43746	65.299	89.71468
503	96.96314	28.96788	30.03224	41.25751	65.9274	90.00844
504	97.38289	29.0968	29.91345	41.34045	65.26005	89.62953

505	97.42901	29.23477	29.87054	41.70326	64.81372	89.46791
506	97.3285	29.28446	29.8532	41.6881	65.24805	89.92282
507	97.14287	29.29193	29.812	41.83096	65.2288	89.93701
508	97.08729	29.14507	29.85491	41.7535	65.52522	89.80866
509	97.36752	29.32828	29.94744	41.60169	65.73107	90.0004
510	97.15469	29.37385	29.70042	41.95208	65.02409	90.05795
511	97.05064	29.2073	29.90796	41.54652	65.28949	89.67636
512	97.38053	29.4137	30.10605	41.96414	65.02817	89.99614
513	96.88629	29.23032	30.09403	41.88997	65.39773	89.74748
514	96.84372	29.68646	29.8108	41.89162	65.47178	89.76892
515	97.18189	29.53786	29.95499	41.93619	64.90996	90.20759
516	97.19962	29.70091	29.73784	41.75332	64.84972	90.21784
517	97.30012	29.85094	29.88427	41.77323	64.80828	89.97722
518	97.01044	29.67122	29.91345	41.88942	64.97404	90.14657
519	97.02226	30.16705	29.89577	41.95336	65.26277	89.99693
520	97.04355	30.00495	29.76788	41.84631	64.91811	89.80251
521	97.08611	30.0702	30.11807	41.71514	65.34565	89.99472
522	97.05537	30.40726	29.96169	42.44534	65.27998	90.07246
523	96.9726	30.51586	30.024	42.52773	64.76526	89.8331
524	96.83071	30.67399	30.17952	42.43127	65.14298	89.90106
525	96.88156	30.63367	30.21454	42.57158	65.31712	89.79841
526	97.12395	30.62938	30.21934	42.35436	65.05217	89.88009
527	96.9395	30.7664	30.24921	42.52335	65.448	90.05653
528	97.10267	30.88611	30.0149	42.39894	65.35584	90.13852
529	97.08966	30.99645	30.21231	42.11669	64.99488	90.12875
530	96.91585	31.16474	30.20166	42.21314	64.99103	90.08065
531	96.98679	31.14379	30.01044	42.05494	65.43034	89.83814
532	97.17597	31.43973	29.91723	42.28951	65.40453	90.08081
533	97.10739	31.32446	30.26878	41.91938	65.06961	90.07293
534	97.03763	31.86411	30.33539	42.35381	65.75077	89.5056
535	96.69829	31.81998	29.92718	42.03429	65.34225	89.82931
536	97.02817	31.89301	30.10245	42.22082	65.36852	89.65523
537	97.18307	32.09591	30.20407	42.18793	65.91494	89.68078
538	96.94304	32.34978	30.13146	42.15341	65.86603	89.84745
539	97.02344	32.36026	30.19257	42.20364	65.64162	89.54517
540	97.05419	32.28405	30.02331	42.03356	65.63007	89.86101
541	97.05892	32.25325	30.08356	42.40661	65.71182	89.98573
542	96.93477	32.1753	30.19978	42.15414	65.99556	89.80156
543	97.14523	32.63191	30.17849	42.34358	65.48763	89.62259
544	96.95014	32.35105	30.23085	42.28184	65.93759	89.77302
545	97.40654	32.47664	30.37246	42.4742	65.6971	90.05732
546	96.96433	32.29834	30.29144	42.2727	65.59316	89.67747
547	96.9525	32.40408	30.10227	42.28001	65.61716	89.69986

548	96.7243	32.17276	30.02726	42.14299	65.4514	89.9482
549	96.90639	32.54649	30.19205	42.72576	65.96816	89.82584
550	96.99152	32.73717	30.3692	42.60811	66.10969	89.62559
551	97.19844	32.82164	30.06193	42.82478	65.72133	89.71973
552	96.84254	32.68764	30.2475	42.60318	65.36376	90.07876
553	96.8118	33.03026	30.34242	42.60775		89.78737
554	96.72903	32.791	30.3668	42.86716		89.83767
555	96.87446	33.19458	30.24183	42.78879		89.69655
556	96.78224	33.5426	30.36577	43.19271		89.61802
557	96.83663	33.4421	30.2269	43.13371		89.72919
558	96.99389	33.28937	30.5249	43.12421		89.3446
559	96.81298	33.77535	30.4231	43.08876		89.68598
560	96.8047	33.91999	30.47889	43.4377		89.30928
561	96.81771	33.77837	30.33058	43.67501		89.33656
562	96.88156	33.87045	30.48559	43.75356		89.86069
563	96.72903	33.73375	30.52919	43.7426		89.54707
564	96.80943	34.07193	30.59579	43.82518		89.60572
565	96.80588	34.30516	30.32749	44.10286		89.80408
566	96.80825	34.27102	30.17351	43.93022		89.32079
567	97.11331	34.01096	30.67149	44.12697		89.3137
568	96.74322	34.19608	30.42808	44.26015		89.90736
569	96.86973	34.03716	30.49245	44.36703		89.62449
570	96.85436	34.10352	30.4952	44.60598		89.88624
571	96.86382	34.21101	30.4928	44.65732		89.75441
572	96.98088	34.14163	30.49812	44.74464		89.51789
573	96.8721	34.02763	30.46739	44.70646		89.51033
574	96.88747	34.26785	30.27428	44.9825		89.51742
575	96.95132	34.31135	30.37143	44.65695		89.62275
576	97.03527	34.49473	30.67338	44.66115		89.53429
577	96.84136	34.35263	30.35272	45.00972		89.32789
578	96.89811	34.46567	30.40422	44.66481		89.52231
579	96.87801	34.1937	30.45829	44.71358		89.60809
580	96.78697	34.39724	30.55803	44.35387		89.50654
581	97.03882	34.04478	30.53056	44.33049		89.64372
582	96.88038	34.21625	30.37624	43.78498		89.66785
583	96.99507	34.27404	30.64437	44.13757		89.47501
584	96.79761	34.28007	30.71166	43.57106		89.82111
585	96.87092	34.16195	30.52696	43.66715		89.42881
586	96.86737	33.95476	30.77157	43.15471		89.91714
587	96.85436	34.29674	30.44576	43.51899		89.96508
588	96.88274	34.15052	30.49211	43.6308		89.42455
589	96.82007	34.27928	30.51151	43.37997		89.39096
590	96.67227	34.16878	30.51391	43.44007		89.55905

591	96.80588	34.08574	30.6466	43.3553		89.40783
592	96.7042	33.92602	30.45726	43.27145		89.42502
593	96.63798	34.34056	30.6387	43.03999		89.323
594	96.53866	34.09749	30.76058	43.04309		89.95183
595	96.77751	34.11099	30.55803	43.42527		89.50906
596	96.61552	34.18719	30.67853	42.89329		89.21452
597	96.67937	34.00144	30.69981	43.01825		89.26324
598	96.44998	34.35866	30.84092	43.24989		89.64467
599	96.47363	34.25721	30.69175	42.9755		89.5857
600	96.55876	34.32389	30.72402	42.78222		89.36715
601	96.41097	34.26356	30.74376	42.82734		89.32127
602	96.39205	34.05542	30.56781	43.34507		89.33278
603	96.25371	34.104	30.64849	43.03688		89.54076
604	96.52684	34.33532	30.78376	43.13407		89.38592
605	96.39205	33.93872	30.76625	43.55571		89.31512
606	96.19104	33.87823	30.94391	43.26561		89.38308
607	96.15912	34.037	30.65484	43.29027		89.53004
608	96.54576	33.91364	30.73449	42.95851		89.70885
609	96.53748	34.02303	30.65724	43.49926		89.29257
610	96.1	33.77837	30.90065	43.33411		89.39617
611	96.02196	34.14941	30.85774	43.65729		89.68235
612	96.30455	34.07733	30.87662	43.63646		89.31401
613	96.12483	33.43194	30.6351	43.48501		89.45183
614	96.11891	33.73566	30.81603	43.51954		89.50291
615	96.14138	33.76884	30.74239	43.8186		89.45766
616	95.9451	33.74741	30.82135	43.85002		89.55574
617	95.87652	33.77043	30.79577	43.7753		89.40563
618	95.84105	33.7644	30.9125	43.60358		89.27365
619	95.9522	33.66771	30.9046	43.71447		89.25015
620	95.72636	33.53482	30.68643	43.6054		89.48273
621	95.5892	33.51894	30.94941	44.10323		89.15681
622	95.75947	33.78186	31.04811	43.83632		89.21594
623	95.76893	33.62389	30.89533	44.0201		89.35312
624	95.60812	33.56943	30.60369	43.98959		89.15996
625	95.80558	33.28619	30.89413	44.209		89.40026
626	95.69917	33.33842	30.65364	44.39114		89.16169
627	95.75001	33.26269	30.81156	44.10359		89.1535
628	95.58802	33.52672	30.59493	44.47152		89.35406
629	95.69444	33.25142	30.81362	44.47737		89.41761
630	95.90135	33.14886	30.74977	44.40576		89.38986
631	95.35509		30.74221	44.57017		89.27207
632	95.6767		30.83748	44.7925		89.11676
633	95.35154		30.68231	44.88878		

634	95.43431		30.74221	44.5488		
635	95.68025		30.9573	45.20702		
636	95.39884		30.90718	44.80091		
637	95.44022		30.72179	45.20044		
638	95.67434		30.87285	44.90595		
639	95.28415		30.87405	45.1935		
640	95.57738		30.89619	45.39683		
641	95.38228		30.80092	45.52563		
642	95.55964		30.68952	45.48872		
643	95.38701		30.88933	45.20702		
644	95.33381		30.88263	45.27224		
645	95.54545		30.87731	45.55668		
646	95.32553		30.83611	45.38003		
647	95.37401		30.83165	45.80898		
648	95.18837		30.96468	45.35829		
649	95.42721		30.84658	45.68657		
650	95.24867		30.77122	45.7865		
651	95.39411		30.8301	45.55705		
652	95.23212		31.01069	45.77445		
653	95.58447		30.91387	45.82907		
654	95.34799		30.85087	45.86195		
655	95.48752		30.88263	45.36468		
656	95.33499		31.01549	45.36267		
657	95.31016		30.83628	45.77116		
658	95.35272		30.68471	45.18108		
659	95.71927		31.03008	45.52289		
660	95.5963		31.12467	45.64803		
661	95.35154		30.57536	45.64858		
662	95.44732		30.8792	45.31535		
663	95.71927		30.69793	45.28265		
664	95.58802		30.65227	45.48745		
665	95.68498		30.79835	45.69644		
666	95.85524		31.0627	45.50115		
667	95.81622		30.82204	45.56034		
668	95.76893		30.90031	45.20209		
669	95.90845		31.08828	45.85775		
670	95.92973		30.85431	45.54444		
671	95.82805		31.11265	45.66812		
672	95.85288		31.09291	45.86871		
673	95.81859		31.02476	45.64565		
674	95.83159		30.99438	45.54097		
675	96.08463		31.11488	45.85026		
676	96.06571		31.14578	45.75125		

677	95.90372		31.08124	45.74193		
678	95.93091		31.00176	45.79509		
679	95.96875		31.04176	45.67178		
680	95.94156		31.2232	45.56125		
681	95.7642		31.11729	45.70868		
682	96.11655		31.01927	45.46059		
683	95.86707		31.3274	45.83948		
684	95.71454		31.25993	45.88881		
685	95.99122		31.2196	45.74924		
686	95.87416		31.2589	45.89392		
687	96.32229		31.30491	45.50626		
688	95.86707		31.10853	45.33362		
689	96.17094		31.2347	45.72731		
690	95.93683		31.2129	45.72165		
691	96.19459		31.17994	45.66082		
692	96.10473		31.17514	45.36833		
693	96.13902		31.27624	45.17231		
694	96.12956		31.33632	45.49402		
695	95.95101		31.28362	45.69132		
696	95.89781		31.2965	45.42369		
697	96.09408		31.2335	45.38898		
698	96.18631		31.17926	45.88899		
699	96.03142		31.15368	45.59121		
700	96.14374		31.43125	45.63341		
701	96.18513		31.35932	45.61642		
702	96.02551		31.4364	45.91128		
703	96.1603		31.44533	45.64949		
704	96.01605		31.40258	45.75161		
705	95.81977		31.28122	46.09013		
706	96.11773		31.34542	46.119		
707	96.2005		31.2692	45.90671		
708	95.8446		31.28586	46.14603		
709	96.02905		31.31967	46.27556		
710	95.98176		31.40773	45.9955		
711	96.06334		31.18526	46.18367		
712	96.28445		31.20827	46.20267		
713	96.00068		31.28894	46.27446		
714	96.00304		31.48875	46.07734		
715	96.12246		31.41511	46.24633		
716	96.08108		31.45322	46.17252		
717	95.83869		31.33598	46.28853		
718	95.99358		31.43623	46.53936		
719	96.10118		31.24792	46.32397		

720	96.20759		31.25187	46.34553		
721	96.36722		31.30869	46.09013		
722	96.10591		31.45374	46.55543		
723	96.10827		31.75345	46.64331		
724	96.12246		31.47725	46.70597		
725	96.29154		31.32911	46.52346		
726	96.09763		31.60394	46.60165		
727	96.26435		31.53012	46.3121		
728	96.08935		31.32602	46.48291		
729	96.1331		31.34662	46.80535		
730	95.99122		31.46919	46.57279		
731	96.22888		31.49631	46.7489		
732	96.2005		31.41649	46.69135		
733	96.13783		31.45751	46.44966		
734	96.113		31.37186	46.67729		
735	96.24898		31.35984	46.51652		
736	95.73464		31.39022	46.91825		
737	95.9924		31.34233	46.64093		
738	96.28681		31.48086	46.55854		
739	95.92027		31.26405	46.71492		
740	96.02905		31.51948	46.81668		
741	96.08226		31.34216	46.64148		

Table Apx. 1. 2: Dominance effect of V2E on different percent fusion of WT:V2E at lipid:protein 600:1.

Time (s)	FPHM:V2E (100:0)	FPHM:V2E (0:100)	FPHM:V2E (1:1)	FPHM:V2E (3:1)	FPHM:V2E (9:1)	FPHM:V2E (19:1)
1	17.43364	0.11067	0.22153	1.48487	3.97737	2.7276
2	17.88948	0.14594	0.12768	1.55059	4.06934	2.28712
3	17.85765	0.1912	0.0765	1.4956	4.13382	1.87269
4	18.16728	0.27741	0.26504	1.73627	4.25894	3.16092
5	17.92743	0.3755	0.2092	1.83188	4.4533	3.4388
6	18.0505	0.52796	0.2212	1.63107	4.65261	3.94963
7	17.75808	0.85302	0.12301	1.68051	4.83562	4.31696
8	17.8025	1.11786	0.36156	1.54522	4.99994	4.62585
9	20.76595	1.37167	0.31305	1.78666	5.23186	5.1991
10	21.25918	1.27015	0.2452	1.88228	5.41798	5.50063
11	20.14483	1.76884	0.44775	1.97771	5.63781	5.84073
12	19.84667	1.69622	0.39974	2.10839	5.92451	6.37542
13	18.96645	2.17564	0.41958	2.17833	5.86002	6.66741
14	18.19375	2.1161	0.53527	1.8522	6.17584	6.8638

15	17.8856	2.24722	0.41174	2.00626	5.9573	7.1375
16	18.30313	2.40726	0.52577	2.13445	6.21669	7.30069
17	19.51039	2.56987	0.66846	2.18906	6.2907	7.6219
18	20.73023	2.79341	0.69664	2.30135	6.25773	7.72367
19	22.02891	2.88031	0.5206	2.25536	6.15478	7.95464
20	23.22895	3.1608	0.85417	2.34427	6.33833	8.21404
21	24.48655	3.0209	0.77065	2.38221	6.45118	8.19535
22	25.45339	3.23824	0.85817	2.3458	6.38193	8.3983
23	26.56126	3.06805	0.93969	2.46135	6.21688	8.42434
24	27.00766	3.32772	0.99654	2.18216	6.38175	8.66107
25	27.45943	3.14222	1.19641	2.48166	6.07564	8.63026
26	27.7104	3.4628	1.03338	2.54221	6.30499	8.73959
27	28.3776	3.33615	1.15124	2.53934	6.23813	9.05464
28	28.64726	3.41668	1.03104	2.64856	6.53673	9.38976
29	29.10736	3.4542	1.14473	2.74437	6.31727	9.79764
30	29.3015	3.39104	1.24226	2.65373	6.34914	9.91928
31	29.846	3.58051	1.32177	2.7093	6.67046	10.06598
32	29.7642	3.37779	1.32577	2.73632	6.81188	10.0133
33	29.965	3.49636	1.38529	2.67615	6.63327	10.07989
34	30.1684	3.40997	1.41429	2.76161	6.73732	10.23195
35	30.09178	3.61595	1.73536	2.75548	6.75399	10.51042
36	30.3111	3.57999	1.65068	2.75261	6.97785	10.71178
37	30.51764	3.62886	1.71653	2.77618	7.17624	11.1926
38	30.43788	3.71542	1.51215	2.89249	7.53402	11.30689
39	30.49247	3.88836	1.68702	2.75625	7.4492	11.34844
40	30.63276	3.8579	1.52865	2.91893	7.67855	11.51183
41	30.42899	3.7605	1.38695	2.82025	7.92146	11.58875
42	30.74788	3.87993	1.63034	2.97048	7.87915	11.71855
43	30.78545	3.50014	1.69002	2.90399	8.15008	11.66528
44	30.95646	3.73882	1.68002	2.8808	8.11235	12.0809
45	30.86078	3.66947	1.68885	2.88923	8.23985	12.07514
46	30.97645	3.63781	1.64401	2.96454	8.38768	12.53648
47	31.06084	3.84844	1.75103	2.97508	8.41626	12.5981
48	30.88558	3.94841	1.73953	3.1529	8.4256	12.9382
49	31.06769	3.95014	1.68702	2.90322	8.54834	13.23715
50	31.04086	3.87149	1.92824	2.99884	8.50181	13.27452
51	31.18151	3.93585	1.91324	3.09024	8.58681	13.65695
52	31.22056	4.06147	1.77771	2.98159	8.77531	13.87182
53	31.1321	3.92191	1.7632	3.29872	8.56703	13.89865
54	31.27757	4.13323	1.68219	3.17072	8.66247	14.19561
55	31.0366	4.14682	1.63434	3.12377	8.47635	14.19184
56	31.30829	4.27262	1.93941	3.06648	8.7231	13.96067
57	31.15227	4.14596	1.76037	3.39376	8.85738	14.20814

58	30.96997	4.19896	1.96642	3.20789	9.09681	14.34211
59	31.31273	4.33422	1.70919	3.30677	9.01822	14.50987
60	31.27886	4.41166	1.86973	3.49647	9.16917	14.3439
61	31.15209	4.62194	1.7467	3.53843	9.36445	14.8287
62	31.14283	4.98004	2.0661	3.53843	9.2811	14.79471
63	31.08527	5.07159	1.86156	3.58155	9.53537	14.86288
64	31.22279	5.2404	2.04977	3.73599	9.69346	15.07795
65	31.60978	5.4395	1.85489	3.66356	9.65115	14.95969
66	31.34993	5.87641	1.87706	3.71894	9.92282	15.18748
67	31.44247	6.11302	1.99759	3.7358	10.093	15.32602
68	31.3566	6.20508	2.12545	3.85134	10.24487	15.37631
69	31.42341	6.47525	1.87206	4.06672	10.36486	15.40851
70	31.6529	6.7301	1.95991	4.03932	10.75853	15.6196
71	31.67104	6.79326	1.90123	4.00809	10.69075	15.56414
72	31.90646	6.93282	2.02776	4.42275	10.88182	15.75178
73	31.63532	7.11109	2.25931	4.28268	10.94392	15.81917
74	31.8117	7.29832	2.1933	4.76268	11.39164	16.02827
75	31.89739	7.62062	2.15029	4.46989	11.31232	16.31649
76	31.69732	7.80647	2.11145	4.6548	11.55816	16.40335
77	31.79134	7.77963	2.14829	4.65346	11.59315	16.25069
78	31.83095	8.12534	2.03676	4.89796	11.93846	16.69216
79	31.81688	8.13704	2.04043	4.62203	11.93113	16.93387
80	32.16205	8.53816	2.22464	4.80962	12.07018	16.97402
81	32.23775	8.57533	2.21697	5.15607	12.14455	17.29602
82	32.04804	8.72521	2.13729	5.06524	12.13319	17.6715
83	32.30974	8.80144	2.27432	5.00546	12.26747	17.57748
84	32.15002	9.12117	2.18263	5.17447	12.31199	17.51865
85	32.09339	9.18002	2.34166	5.15626	12.62341	17.54767
86	32.07821	9.28379	2.42785	5.22773	12.51478	17.95574
87	32.37322	9.39374	2.24914	5.47281	12.9396	17.88558
88	32.17093	9.58699	2.5002	5.47109	12.66005	17.99728
89	32.51555	9.67062	2.39018	5.46304	12.78553	17.97363
90	32.51055	9.71932	2.336	5.55808	12.79964	18.09011
91	32.43689	9.79263	2.4882	5.59545	13.02661	17.89253
92	32.46299	9.72483	2.49136	5.7062	13.2316	18.01438
93	32.71691	10.00412	2.5137	5.69337	12.77711	18.34851
94	32.49149	10.0535	2.40301	5.87368	13.05153	18.47552
95	32.98379	10.17396	2.51987	5.75008	13.05446	18.40436
96	32.47742	10.19874	2.48903	5.62649	13.03834	18.41947
97	32.47353	10.35619	2.55404	5.78994	13.19277	18.61983
98	32.61123	10.50057	2.42068	5.64201	13.1096	18.45306
99	32.67693	10.67867	2.45035	5.65773	13.05574	18.91143
100	32.3288	10.46856	2.55771	5.98616	13.0453	18.82933

101	32.66768	10.62103	2.48186	5.87713	13.04347	18.69139
102	32.78854	10.8671	2.75292	5.89054	13.05244	18.79435
103	32.82981	11.01888	2.75659	5.94707	12.94161	18.5926
104	32.86997	10.93301	2.84594	6.12221	12.93154	18.9148
105	32.70562	10.97637	2.68557	5.94304	13.11473	18.9959
106	32.75929	11.19302	2.57005	6.04039	13.11949	19.14478
107	32.84313	11.09167	2.75075	6.0354	12.79488	19.14021
108	32.84924	11.2801	2.6629	5.92522	12.7401	19.26901
109	32.90143	11.23759	2.75142	6.1818	13.09146	19.2062
110	32.82851	11.37543	2.72425	5.91239	13.05812	19.05832
111	33.1152	11.28423	2.71058	5.93653	12.94051	19.46182
112	33.02266	11.28767	2.8021	5.74913	12.94125	19.47394
113	33.24567	11.27304	2.89762	5.92062	12.95169	19.39662
114	33.00507	11.4095	2.91046	5.93806	12.94711	19.34216
115	33.04116	11.28199	2.89512	6.01509	12.87163	19.59241
116	33.2466	11.25566	3.02148	5.83267	13.07259	19.4493
117	33.08059	11.3491	2.84928	5.95991	13.20632	19.58048
118	33.09632	11.53977	3.02998	5.87502	13.35233	19.59599
119	33.23087	11.32707	2.94863	5.84685	13.23398	19.90706
120	33.16443	11.62237	2.9563	5.86314	13.29041	19.73075
121	33.17923	11.37577	3.11367	5.96527	13.41754	19.93688
122	33.07152	11.54286	2.85744	5.84149	13.51665	20.22927
123	33.192	11.51688	2.93463	5.9852	13.46187	20.01798
124	33.26474	11.45166	3.08233	5.93787	13.63371	20.01301
125	33.23346	11.4687	3.02665	5.81753	13.97316	20.33998
126	33.40355	11.56042	3.4359	5.69682	14.10011	20.50437
127	33.44815	11.40451	3.30804	5.77385	14.25142	20.39425
128	33.25234	11.47747	3.40023	5.91756	14.4925	20.70512
129	33.30286	11.18769	3.38756	6.01318	14.86713	20.96293
130	33.29676	11.64233	2.93896	6.1247	15.03603	21.15772
131	33.4909	11.39195	3.08499	6.03598	14.94572	20.83691
132	33.56882	11.29868	2.98747	5.87387	15.16683	21.35172
133	33.55882	11.55112	3.03515	6.06645	15.51434	21.18853
134	33.33858	11.42189	3.07216	6.40657	15.59091	21.37319
135	33.45629	11.22589	3.05232	6.41423	16.14378	21.69003
136	33.46295	11.37285	3.11917	6.23909	16.16906	21.64411
137	33.36024	11.33929	3.20202	6.33107	16.36233	21.78206
138	33.37449	11.38059	3.14767	6.64839	16.44788	21.8399
139	33.67746	11.58761	3.33572	6.60374	16.63583	21.70533
140	33.44741	11.5365	3.20986	6.68537	16.5904	21.93471
141	33.73631	11.56317	3.29621	7.00786	17.06266	21.74469
142	33.84865	11.33602	3.17485	6.70587	17.04563	22.0816
143	33.80424	11.52927	3.13	6.72389	17.11487	21.92756

144	33.59732	11.56954	3.21436	7.04983	17.50049	21.98083
145	33.77314	11.37027	3.36822	7.09812	17.46898	21.83732
146	33.6819	11.66005	3.35805	7.43383	17.92952	22.18238
147	33.97136	11.69791	3.32671	7.46717	18.11931	21.91662
148	34.023	11.72131	3.51142	7.45663	18.14514	21.95598
149	33.75871	11.47506	3.34005	7.82358	18.52983	21.75582
150	34.13386	11.80821	3.51225	8.03149	18.50968	22.17125
151	33.94489	11.76829	3.58494	7.91977	18.89548	21.75443
152	33.88567	11.86672	3.55826	8.07786	19.10285	21.92
153	33.89252	11.75538	3.45424	8.26239	19.09882	21.81426
154	33.83496	11.86896	3.47858	8.32869	19.46191	22.03966
155	34.00134	11.95035	3.66212	8.25146	19.86822	22.05696
156	34.01004	11.93383	3.56427	8.6119	20.0712	22.14064
157	34.13589	12.00714	3.69096	8.45496	20.00873	22.01899
158	33.84643	12.20314	3.62895	8.44787	20.23424	21.80392
159	34.10332	12.15169	3.66329	8.83628	20.30367	21.84288
160	33.96359	12.12226	3.68213	8.52797	20.55336	22.15018
161	34.12886	12.07958	3.68979	8.50248	20.46139	21.94743
162	34.15977	12.18714	3.87767	8.60883	20.66858	21.97586
163	34.10517	12.21742	3.78515	8.41261	20.55061	22.373
164	34.33263	12.43442	3.8505	8.39728	20.55281	22.00448
165	34.45145	12.44113	3.864	8.36873	20.81697	22.66638
166	34.31819	12.55074	3.85816	8.43944	20.92029	22.6469
167	34.42387	12.51288	3.81315	8.37621	21.01793	22.61013
168	34.42628	12.67344	3.96735	8.58909	21.17675	22.90312
169	34.42961	12.73022	4.01203	8.35551	21.07142	22.73436
170	34.32486	12.68101	3.93168	8.5387	21.33246	23.00151
171	34.25231	12.77651	4.04187	8.43235	21.09267	23.10686
172	34.49124	12.81437	4.0312	8.42794	21.52207	23.08142
173	34.67465	12.73934	4.11405	8.64006	21.27513	23.19551
174	34.60543	12.72317	3.94518	8.44806	21.41966	23.4237
175	34.6889	12.79286	4.26392	8.47834	21.62044	23.36248
176	34.6952	12.95703	4.25992	8.76577	21.95	23.39666
177	34.83012	13.0515	4.26642	8.77266	22.04233	23.38792
178	34.85344	13.04152	3.98486	8.94914	22.09362	23.44854
179	34.8055	12.89112	4.06971	8.61649	22.01595	23.67097
180	34.7659	13.00968	4.44996	8.90047	22.34368	23.61332
181	34.73869	12.97389	4.31927	9.18388	22.14272	23.65844
182	34.84474	13.18624	4.41845	9.1559	22.57871	23.95859
183	35.02796	13.06767	4.16106	9.33909	22.54793	23.90154
184	34.9184	13.02121	4.24275	9.36036	22.19181	23.74232
185	34.88471	13.12635	4.50281	9.492	22.35796	24.1341
186	34.88157	13.00228	4.34477	9.56098	22.31638	24.2313

187	35.02093	13.11534	4.3461	9.65161	22.32426	23.99933
188	35.01816	13.15991	4.53331	9.81755	22.65785	24.21957
189	35.18732	13.14872	4.40862	9.76007	22.4796	24.31756
190	35.08867	13.14855	4.57432	9.69281	22.44645	24.32293
191	34.83012	13.20637	4.85555	10.16592	22.55691	24.44517
192	34.85066	13.04788	4.58332	9.9239	22.68697	24.23507
193	35.159	13.03068	4.57599	10.39701	22.6584	24.33466
194	34.99854	13.00951	4.61833	10.17626	22.68459	24.70238
195	35.36258	13.16473	4.80637	10.13507	22.48217	24.37223
196	35.28115	13.25679	4.76053	10.20922	22.51129	24.7477
197	34.99872	13.20585	4.83088	10.29047	22.61168	24.64315
198	35.27597	13.04548	4.75469	10.09904	22.80623	24.505
199	35.17177	13.24113	4.76853	10.13775	22.69778	24.70457
200	35.15641	13.17746	4.88156	10.50393	22.70529	24.8447
201	35.37332	12.99161	5.07927	10.42268	22.54244	24.61433
202	35.26597	13.12429	4.81871	10.18757	23.06361	24.68092
203	35.25727	13.02999	4.83688	10.24946	22.91138	24.86498
204	35.32797	12.8345	4.99291	10.04596	22.76794	24.95701
205	35.43402	13.11293	5.12111	10.12836	22.95736	25.05619
206	35.78678	13.08419	5.11761	10.60434	22.94014	24.73359
207	35.5595	13.19071	5.00775	11.02839	23.13909	25.1037
208	35.81121	13.03119	5.0776	11.32482	22.94472	24.89996
209	35.7096	13.21308	5.12361	11.62106	23.04987	25.01147
210	35.84101	13.08763	5.20613	11.9631	23.25303	25.2005
211	36.00332	13.07163	5.18462	11.86537	23.49155	25.184
212	35.43735	12.84586	5.04709	12.01139	23.47414	25.63739
213	35.74347	13.12893	5.35233	12.1162	23.46627	25.24284
214	35.38535	13.03016	5.0701	12.16679	23.53185	25.09177
215	34.42646	13.16438	5.41851	12.01637	23.60366	25.3458
216	34.19049	13.17178	5.27764	12.18538	23.66228	25.47977
217	34.39334	13.15199	5.64539	12.25819	23.67803	25.57399
218	34.53529	13.14958	5.49086	12.18461	24.01877	25.61672
219	34.63394	13.13633	5.65789	12.06408	23.98579	25.61732
220	34.90211	13.25817	5.56337	12.24823	23.94256	25.5402
221	35.01778	13.11448	5.51936	12.46475	23.90812	25.79224
222	34.76553	13.1871	5.59371	12.28233	24.15634	25.76322
223	35.18139	13.237	5.65689	12.3837	24.1895	25.97351
224	35.32871	13.4638	5.61338	12.41723	24.48755	25.7501
225	35.37165	13.34128	5.59788	12.39769	24.14847	25.61692
226	35.37387	13.10329	5.69874	12.56938	24.51979	25.91229
227	35.2297	13.39962	5.77709	12.54677	24.54855	26.03911
228	35.54192	13.38138	5.74074	12.49541	24.32561	25.69365
229	35.3611	13.68131	5.79892	12.51438	24.46191	26.14684

230	35.7877	13.51095	5.79526	12.5299	24.45843	25.95682
231	35.73847	13.55243	5.86677	12.50442	24.65206	25.8954
232	35.8336	13.70282	5.85844	12.6627	25.01642	26.03692
233	35.75569	13.89882	6.05648	12.56344	24.92886	26.00412
234	35.74551	13.87095	5.98096	12.78974	24.65682	25.94887
235	36.00147	13.97729	5.99897	12.70064	24.70683	26.16036
236	36.06014	13.79437	6.133	12.85508	24.85668	26.00214
237	36.01979	13.88936	6.07082	12.87635	25.04592	26.38477
238	36.00295	13.97488	6.08449	12.83745	25.09739	26.13333
239	36.14305	13.89452	6.00113	12.98346	25.05874	26.42174
240	36.0222	14.09242	6.35338	12.99611	25.01184	26.11722
241	36.39309	14.09706	6.11849	12.93901	25.17049	26.42055
242	36.22319	14.11014	6.4704	12.90567	25.2815	26.25159
243	36.31813	14.20375	6.27936	12.81829	25.15986	26.36827
244	36.13139	14.26777	6.40872	13.21321	25.4962	26.11106
245	36.24503	14.41077	6.36205	13.05666	25.31502	26.30327
246	36.22097	14.51952	6.20318	13.16473	25.5528	26.42313
247	36.23226	14.43847	6.26119	13.16837	25.47605	26.34303
248	36.21708	14.18775	6.67678	13.11721	25.68891	26.70379
249	36.35867	14.49388	6.35705	12.91697	25.66913	26.69068
250	36.60537	14.1609	6.49008	13.15515	25.75834	27.12817
251	36.5282	14.24264	6.50208	13.26955	25.64751	28.43031
252	36.39198	14.33539	6.78731	13.04785	25.98037	29.57681
253	36.27298	14.42229	6.70379	13.20938	26.06097	29.87775
254	36.57521	14.28308	6.69579	12.96718	25.82777	30.1125
255	36.62203	14.38926	6.63294	13.14557	25.80414	29.75312
256	36.63906	14.41937	6.78481	13.24981	25.91094	29.76365
257	36.61851	14.24058	6.93084	13.1586	25.8188	29.70263
258	36.41326	14.30717	6.86766	13.38567	26.07343	29.79526
259	36.81488	14.16813	6.87416	13.33547	26.01243	29.76584
260	36.60908	14.26725	6.86999	13.22835	25.85818	30.03716
261	36.7725	14.34778	6.8825	13.13925	26.06482	29.84634
262	36.70124	14.39407	6.97752	12.95894	26.18976	29.77976
263	36.74233	14.35312	7.06954	13.34466	26.03844	29.75272
264	36.50728	14.22698	7.08271	13.18964	26.01206	29.65135
265	36.68681	14.41937	7.28008	13.07793	26.09706	29.85628
266	36.38846	14.34692	7.26725	12.99247	26.17217	29.85489
267	36.80248	14.39579	7.36393	13.16952	26.10897	29.47166
268	36.6894	14.20823	7.18073	13.27875	25.93237	29.74716
269	36.64368	14.11995	7.10304	13.17087	25.70082	29.42932
270	36.56558	14.2349	7.29709	13.15285	26.01408	29.92088
271	36.61407	14.25589	7.34426	12.87712	26.09047	30.09282
272	36.67015	14.06161	7.5263	12.73953	25.94831	29.59391

273	36.9387	14.26106	7.54331	13.0534	25.89244	29.61001
274	36.86485	14.09414	7.53197	13.09211	25.71951	29.77777
275	36.80026	14.33281	7.71901	12.97944	25.99356	29.7082
276	36.65368	14.34262	7.77469	12.93537	25.93329	29.8861
277	36.5939	14.26312	7.91456	12.88919	25.78069	29.8054
278	36.81433	14.51333	7.72101	12.91122	25.85525	29.5617
279	36.8717	14.38926	7.60532	13.00339	26.07618	29.93162
280	36.71272	14.3261	7.72918	12.89398	25.91497	29.90438
281	36.73955	14.08725	7.86454	12.82442	25.90361	29.77737
282	36.7377	14.41765	7.94173	12.94744	25.92303	30.06121
283	36.74085	14.26536	8.16444	13.11223	25.85947	29.84932
284	36.82654	14.23404	8.17661	12.57053	26.07398	29.80957
285	36.98515	14.28394	8.15477	12.69393	26.31249	29.92426
286	36.79027	14.39511	8.20912	12.84665	26.0062	29.86682
287	37.12007	14.34331	8.07776	12.44444	25.83822	29.92486
288	36.77731	14.25211	8.17911	12.73398	25.96773	29.90756
289	36.97146	14.25589	8.17945	12.54217	26.05017	29.90359
290	36.88928	14.47908	8.41483	12.64411	26.028	29.94692
291	37.01791	14.53002	8.43067	12.83803	26.22969	29.86483
292	36.82136	14.43744	8.27397	12.58222	25.9692	29.71118
293	37.12951	14.52055	8.33932	12.3906	25.80323	29.85946
294	36.77749	14.26019	8.5852	12.49331	26.09285	29.83163
295	37.19059	14.30993	8.54119	12.36856	26.09908	30.02285
296	37.14913	14.33488	8.25763	12.41953	26.19947	30.11846
297	36.9052	14.42195	8.64238	12.54313	26.29949	29.76147
298	37.08546	14.21184	8.40366	12.17522	26.19177	30.00337
299	37.18948	14.63413	8.5757	12.59908	26.36434	29.91392
300	37.17411	14.30752	8.56637	12.35381	26.37093	30.00973
301	37.49541	14.30993	8.81575	12.5004	26.40281	29.97057
302	37.55981	14.64703	8.84876	12.45441	26.283	29.76684
303	37.46543	14.4087	8.78908	12.59812	26.39585	29.95388
304	37.69881	14.4839	8.95412	12.71117	25.99026	30.00755
305	37.86353	14.47512	8.90094	12.4638	26.34345	30.0803
306	37.8304	14.51522	8.94945	12.61613	26.7157	29.98687
307	38.2372	14.42883	8.87927	12.64871	26.53764	30.05644
308	37.77487	14.39769	8.68272	12.75601	26.37533	30.15463
309	37.87185	14.67818	9.04247	12.76349	26.56347	30.04511
310	38.23109	14.70451	9.18367	12.69834	26.58087	30.2254
311	38.009	14.53415	9.28752	12.7907	26.89064	30.22599
312	38.29105	14.64738	9.0408	12.77326	26.59534	30.02842
313	38.65232	14.66871	9.44439	12.83649	26.80583	30.14827
314	38.26903	14.63912	9.36771	12.77153	26.6699	30.23037
315	38.59328	14.60935	9.30269	12.8409	26.69884	30.30669

316	38.69026	14.53931	9.52124	12.69719	26.78916	30.34406
317	38.78484	14.72137	9.4829	13.05915	26.46876	30.30868
318	38.75504	14.54671	9.57409	12.78131	26.30975	29.89484
319	39.03932	14.85818	9.53624	13.09613	26.75472	30.34903
320	38.77022	14.66717	9.56642	12.95932	26.81792	30.31266
321	39.08337	14.95884	9.41455	12.88421	27.08153	29.88967
322	38.91883	14.48304	9.67828	13.08425	26.77798	30.35142
323	39.09762	14.89104	9.61593	12.93096	26.59955	30.06499
324	38.882	14.95076	9.74196	12.97369	26.87287	30.10812
325	39.19497	14.85078	9.75479	12.93537	26.88368	30.41423
326	39.15314	14.61244	9.81064	12.9871	26.87287	30.26674
327	39.38338	15.03921	9.86748	12.90394	26.94725	30.15304
328	39.32175	14.76026	9.84515	13.24349	26.90402	30.49294
329	38.9664	14.81085	9.89032	12.97158	27.09728	30.53607
330	38.91828	14.77902	9.9565	13.23621	26.93571	30.40747
331	39.35839	14.79743	9.94117	13.34984	27.06413	30.40727
332	38.96473	14.9425	10.06536	13.29139	26.9205	30.47366
333	39.12334	14.84338	9.96801	13.26706	27.08354	30.322
334	39.04506	14.78728	9.98584	13.23563	26.85217	30.34963
335	38.81649	14.84785	10.13304	13.01872	27.14125	30.44365
336	39.01544	15.05332	10.19989	13.37973	27.22716	30.22162
337	39.09188	14.8377	10.06803	13.3209	26.90402	30.27489
338	38.86794	14.7563	10.22206	13.45139	26.91776	30.26237
339	38.94123	14.7773	10.20072	13.2981	27.03811	30.38024
340	38.98639	15.08377	10.39527	13.33911	27.11524	30.20592
341	39.27677	14.85886	10.88654	13.56464	27.02364	30.56251
342	39.33544	14.83563	11.18744	13.5746	27.07035	30.37746
343	39.31767	14.94697	11.19961	13.38471	26.94029	30.21884
344	39.29361	14.85422	11.17744	13.46845	27.21178	30.57801
345	39.06338	14.97072	11.43266	13.49202	27.11175	30.40608
346	39.38819	14.99911	11.41933	13.68555	27.18961	30.30908
347	39.21792	15.02733	11.3223	13.49853	27.13649	30.62413
348	39.20293	14.9745	11.40716	13.44584	26.94523	30.16239
349	39.23643	15.20939	11.75073	13.81183	27.16909	30.51262
350	39.33081	14.8272	11.65521	13.51865	26.93168	30.36851
351	39.31212	14.88106	11.51251	13.49183	27.08428	30.3703
352	39.50368	15.11337	11.76273	13.48857	26.87489	30.30212
353	39.58604	14.96056	11.55636	13.42208	26.88405	30.40846
354	39.32822	14.82617	11.57703	13.40177	26.8661	30.17392
355	39.29269	14.95729	11.76957	13.39506	26.9718	30.66627
356	39.36542	15.03938	11.70655	13.71027	27.09344	30.45259
357	39.61787	15.14263	11.76423	13.37283	27.08134	30.12879
358	39.22495	15.12834	11.83058	13.56636	27.07622	30.46014

359	39.34136	15.26876	11.80091	13.5016	26.81169	30.70463
360	39.27122	15.37063	11.86409	13.61829	27.10864	30.39395
361	39.35173	15.0824	11.93494	13.43606	27.02492	30.46511
362	39.15795	15.0072	11.9266	13.59971	27.05295	30.50268
363	39.23828	15.23469	12.15765	13.61331	27.10388	30.43828
364	39.21366	15.28803	12.03313	13.75185	27.06504	30.36414
365	39.36505	15.17721	12.18249	13.62308	26.87892	30.56887
366	39.44723	15.18857	12.28418	13.497	26.7113	30.46432
367	39.4687	15.55528	12.24634	13.49412	26.91281	30.34168
368	39.25697	15.28029	12.33169	13.80205	26.81315	30.27807
369	39.46537	15.3006	12.41538	13.84019	26.87287	30.48638
370	39.33266	15.25207	12.2365	13.7256	26.70562	30.42476
371	39.25734	15.28735	12.16065	13.86376	27.01393	30.50904
372	39.08263	15.41073	12.45205	13.84095	26.7527	30.3375
373	39.21773	15.41658	12.3687	13.73863	27.0121	30.4347
374	39.25419	15.1958	12.33819	13.76162	26.84521	30.55953
375	39.19811	15.18117	12.48256	13.86107	26.81334	30.57364
376	38.99657	15.31058	12.45855	13.497	26.54185	30.53071
377	39.31693	15.19408	12.36687	13.8193	26.85181	30.46014
378	39.39078	15.53394	12.49406	13.63592	26.6426	30.56529
379	39.13593	15.3875	12.50606	13.7576	26.97088	30.46829
380	39.24938	15.26704	12.62942	13.84134	26.75197	30.46193
381	39.33489	15.32727	12.48806	13.82294	26.58215	30.47803
382	39.24901	15.36822	12.71144	13.76488	26.62245	30.60187
383	39.25993	15.43275	12.62142	13.7256	26.74043	30.50248
384	39.44612	15.44411	12.8218	14.1165	26.84265	30.51759
385	39.20163	15.5212	12.70327	14.01743	26.69225	30.65792
386	39.38023	15.27616	12.76929	13.95535	26.51034	30.57841
387	39.14925	15.5816	12.88248	13.78883	26.54735	30.53985
388	39.54495	15.37545	12.71294	13.85973	26.74043	30.55853
389	39.22162	15.44222	12.86114	13.79247	26.18646	30.64162
390	39.1933	15.58797	12.70544	13.95362	26.6503	30.63287
391	39.4302	15.41623	12.94599	13.78596	26.49257	30.76446
392	39.16776	15.50761	12.76862	14.04733	26.95531	30.82091
393	39.1946	15.37769	12.98017	14.00632	26.63326	30.75651
394	39.39078	15.30782	12.9695	14.02625	26.56585	30.44305
395	39.26271	15.48524	12.88065	14.36177	26.53452	30.65474
396	39.1909	15.70137	12.94249	14.28685	26.36122	30.35181
397	39.24364	15.47423	12.89682	14.08412	26.46711	30.77837
398	39.66118	15.36564	12.87398	14.12876	26.37423	30.52514
399	39.54199	15.43138	13.09369	14.25964	26.55064	30.93481
400	39.34581	15.66351	12.92699	14.14639	26.5032	30.64798
401	39.18756	15.44463	13.14604	14.11152	26.57885	30.57245

402	39.145	15.57799	13.05935	14.2286	26.36031	30.70443
403	39.20459	15.63082	13.1457	14.16824	26.5173	30.84794
404	39.23235	15.67831	13.00834	14.29796	26.52335	30.86663
405	39.46537	15.60759	13.04602	14.2102	26.4803	30.90261
406	39.35247	15.62067	13.05668	14.25523	26.17529	30.65792
407	39.25308	15.97085	13.11853	14.20234	26.29436	30.98649
408	39.46962	15.84781	13.21522	14.22055	26.0956	30.45796
409	39.19885	15.68571	13.23922	14.5051	26.34126	30.65971
410	39.41521	15.89169	13.20872	14.22994	26.17474	30.70165
411	39.18997	15.7721	13.2809	14.36311	26.39786	30.7583
412	39.25882	15.84833	13.38626	14.49629	26.03917	30.9354
413	39.44852	15.80462	13.2679	14.48939	26.07526	30.85411
414	39.38412	16.06395	13.19888	14.17245	26.19269	30.72431
415	39.56494	15.69587	13.52412	14.25638	25.94007	30.82091
416	39.42631	15.77743	13.37859	14.36656	25.89885	30.68475
417	39.41817	15.93058	13.32574	14.15808	26.06555	30.59869
418	39.60121	16.06446	13.37559	14.22304	26.08479	30.36931
419	39.42946	15.80084	13.48628	14.137	25.92468	30.72669
420	39.58641	16.18423	13.38992	14.23319	26.11373	30.73087
421	39.6906	15.91389	13.46061	14.06016	25.91424	30.7253
422	39.49868	16.0975	13.51762	13.99521	25.77043	30.66368
423	39.58178	15.85039	13.55946	14.08105	25.96297	30.64281
424	39.44223	16.11729	13.52579	14.1531	25.9157	30.71934
425	39.48794	16.22588	13.48778	14.14371	25.88365	30.91632
426	39.58067	15.95468	13.75217	13.99521	25.93659	30.98311
427	39.77703	16.08873	13.55263	13.97528	25.98019	30.70503
428	39.5629	16.14878	13.52912	14.23933	26.0247	30.82747
429	39.72447	16.18957	13.64148	13.89729	25.62187	30.77539
430	39.55069	16.02368	13.72667	14.06323	25.88951	30.87637
431	39.81035	16.12486	13.68366	14.06917	25.97836	30.6132
432	39.74964	15.9693	13.68732	14.05001	25.9179	30.91095
433	39.78296	16.24016	13.741	13.88522	25.72848	30.6774
434	39.85218	15.97292	13.67482	14.03449	25.83675	30.61121
435	39.8779	16.13003	13.72733	13.88598	25.98184	30.98947
436	39.66469	16.19249	13.5848	14.13374	25.89189	30.93103
437	39.84348	16.37851	13.82969	14.18261	26.00419	30.92089
438	39.62786	16.10886	13.67549	13.96321	25.90746	30.709
439	39.79147	16.12056	13.85236	14.07396	25.6455	31.04989
440	39.52514	16.29058	13.94221	14.3543	25.88768	30.97456
441	39.9275	16.21641	13.97022	14.06342	25.79901	30.75154
442	39.77703	16.15033	13.88287	14.11133	25.85305	30.89903
443	39.81349	15.97515	14.07091	13.66946	25.94117	30.81217
444	39.85273	16.33394	13.8937	14.10634	25.87375	30.96383

445	39.79517	16.30331	13.94221	14.00038	25.82264	30.91692
446	39.70837	16.27406	14.01089	13.99176	25.87907	30.78056
447	39.96026	16.17924	13.83919	14.28263	25.79993	30.8223
448	40.05946	16.18939	13.96222	14.19181	25.92541	30.93401
449	39.66895	16.28111	14.20994	14.22093	25.72647	30.9515
450	39.98506	16.48795	14.04123	14.11746	26.07691	30.84933
451	39.97211	16.65986	14.20327	14.57677	25.83455	31.01551
452	39.79073	16.3071	14.0139	14.20349	26.07819	30.85808
453	40.12812	16.4217	14.25128	14.17284	25.73453	30.93481
454	39.87735	16.1746	14.10608	14.14256	25.71474	30.94514
455	39.97081	16.60652	14.1766	14.51181	25.63121	30.80243
456	40.01412	16.51876	14.14676	14.27937	25.61436	30.92328
457	39.76149	16.44597	14.06274	14.47521	25.57644	31.02266
458	39.80146	16.53992	13.94671	14.26788	25.58541	30.79408
459	40.13812	16.5234	14.28562	14.24278	25.73783	31.02584
460	39.87161	16.33171	14.14192	14.46735	25.65191	30.42596
461	40.07538	16.25943	14.35314	14.57523	25.9692	31.05844
462	40.24639	16.60239	14.45466	14.4593	25.65686	31.07017
463	39.91362	16.2374	14.36314	14.35621	25.53925	30.69569
464	39.89178	16.35683	14.12842	14.66778	25.40827	31.06122
465	40.08722	16.43409	14.15409	14.54304	25.54676	30.92765
466	39.92639	16.41293	14.06391	14.78218	25.45864	30.73067
467	40.12109	16.60635	14.38798	14.45298	25.32547	30.99801
468	39.80905	16.574	14.30563	14.37384	25.25146	31.18506
469	40.11776	16.64352	14.26062	14.54706	25.39013	30.97297
470	40.21289	16.69652	14.22494	14.68196	25.37108	30.89565
471	39.95989	16.4236	14.22928	14.45413	25.51378	30.79984
472	40.15552	16.64042	14.31696	14.52024	25.47733	30.83622
473	40.0565	16.46128	14.17093	14.48479	25.27014	31.04632
474	40.10277	16.42325	14.34463	14.54438	25.21189	30.90519
475	40.28544	16.55352	14.31163	14.87588	25.22453	31.02525
476	40.07371	16.57159	14.37431	14.81725	25.25164	31.10833
477	40.03077	16.65745	14.27729	14.58347	25.3502	30.92089
478	40.09	16.68344	14.30046	14.51832	25.37474	31.22978
479	40.28988	16.53786	14.43682	14.65092	25.0668	31.05447
480	40.29136	16.59791	14.25828	14.75056	25.50774	30.9688
481	40.16755	16.71373	14.1806	14.82069	25.23698	31.00398
482	40.24509	16.70443	14.32046	14.7977	25.24413	31.20871
483	40.12072	16.67277	14.23278	15.07171	25.09007	31.13974
484	40.20882	16.6535	14.53318	14.84867	24.99554	31.13338
485	40.06427	16.65212	14.23178	14.92551	25.40314	31.0644
486	40.37687	16.48985	14.42449	14.87914	25.02961	31.38979
487	40.20401	16.57434	14.37547	15.05006	25.16517	31.21686

488	40.09592	16.72147	14.17793	14.94448	25.01441	30.93302
489	40.15459	16.59017	14.28212	14.85978	25.45168	31.03658
490	40.44294	16.56728	14.63787	15.06271	25.22819	31.36594
491	40.11165	16.75434	14.45483	14.82989	25.28681	31.18943
492	40.19993	16.8063	14.44366	15.07497	25.21299	31.10754
493	40.23047	16.9216	14.47666	15.19818	25.12176	31.10297
494	40.39445	17.02571	14.39531			31.20633
495	40.22214	17.06942	14.37864			31.31585
496	40.06131	16.96066	14.41998			31.09482
497	39.9225	16.98871	14.20077			31.2916
498	40.34633	17.05599	14.44749			31.23336
499	40.36761	16.80252	14.56918			30.89545
500	40.41481	17.0541	14.52184			31.26576
501	40.39704	17.14358	14.33163			31.35262
502	40.18235	17.08009	14.46116			31.49514
503	40.48181	17.1558	14.56452			31.30173
504	40.19716	16.90749	14.53101			31.38442
505	40.34707	17.02003	14.52017			31.2906
506	40.52604	16.92693	14.68804			31.38085
507	40.35595	17.40583	14.56802			31.29895
508	40.67688	17.32857	14.3623			31.13795
509	40.32486	17.20398	14.81957			31.2757
510	40.43609	17.25957	14.25762			31.42418
511	40.48162	17.14169	14.60853			30.8708
512	40.68317	17.40721	14.42098			31.15306
513	40.42295	17.3814	14.60336			31.45578
514	40.33449	17.54143	14.44882			31.24787
515	40.48643	17.34905	14.48016			31.08388
516	40.21733	17.16096	14.45599			31.17015
517	40.27156	17.39534	14.47			31.37985
518	40.62247	17.34113	14.62886			31.32261
519	40.41462	17.35163	14.70621			31.39198
520	40.54085	17.3136	14.61419			31.32062
521	40.49254	17.49463	14.57102			31.29001
522	40.5116	17.69854	14.71305			31.01113
523	40.5823	17.5934	14.75156			31.28802
524	40.66836	17.47484	14.72138			31.21726
525	40.73166	17.5373	14.58285			31.22004
526	40.601	17.6187	14.66237			31.25045
527	40.52345	17.53404	14.71322			31.28643
528	40.58138	17.32048	14.61469			31.33354
529	40.69983	17.31652	14.81657			31.48122
530	40.51105	17.6125	14.73339			31.25105

531	40.60747	17.60252	14.69838			31.41364
532	40.54584	17.27695	14.60553			31.37667
533	40.5427	17.50908	14.70388			31.27013
534	40.6047	17.40222	14.74839			31.27589
535	40.56065	17.40635	14.8099			31.29716
536	40.58156	17.5213	14.66637			31.26158
537	40.46219	17.35215	14.73139			31.42358
538	40.38742	17.42253	14.52551			31.19599
539	40.82179	17.28349	14.55051			31.52078
540	40.68724	17.54935	14.66504			31.50885
541	40.65633	17.39121	14.52817			31.31485
542	40.61784	17.53989	14.72789			31.09283
543	40.56842	17.38708	14.6407			31.40211
544	40.69057	17.37176	14.53518			31.40609
545	40.60969	17.40532	14.77656			31.07057
546	40.61414	17.36264	14.55268			31.39496
547	40.58989	17.28538	14.44999			31.21746
548	41.0846	17.1016	14.66554			31.58041
549	40.67207	17.28555	14.80807			31.18307
550	40.64467	17.49394	14.67571			31.33314
551	40.84271	17.54212	14.59786			31.26834
552	40.77885	17.28452	14.67654			31.20295
553	40.68039	17.53335	14.55135			31.32201
554	40.74684	17.30087	14.52417			30.9682
555	40.87398	17.2563	14.55935			31.12423
556	40.40407	17.22739	14.71955			31.24071
557	40.98336	17.20846	14.7994			31.10456
558	41.08238	17.31566	14.83141			31.15802
559	40.86899	17.48929	14.95227			31.3228
560	41.03981	17.33786	14.56602			31.25542
561	40.59063	17.4936	14.66554			31.18347
562	40.9073	17.50805	14.6282			31.26119
563	41.04555	17.67789	14.67421			31.2749
564	40.76831	17.43991	14.53268			31.14968
565	40.75628	17.33993	14.68804			31.3401
566	40.82494	17.32272	14.57652			31.21487
567	40.74813	17.27075	14.61803			31.1302
568	41.13365	17.40738	14.76056			31.3228
569	40.88657	17.44541	14.70555			31.07553
570	40.94191	17.39792	14.71772			31.07971
571	41.15104	17.4079	14.81457			31.4037
572	40.93025	17.3857	14.82641			31.12821
573	40.69076	17.28779	14.80173			31.31128

574	41.17066	17.48275	14.81174			31.30611
575	41.10403	17.35232	14.72305			31.43431
576	41.12439	17.443	14.79107			31.1942
577	40.91267	17.57189	14.58935			31.1137
578	40.92784	17.46331	14.77523			31.18685
579	41.07609	17.58583	14.90092			31.31267
580	40.86621	17.51769	14.72739			31.21388
581	40.92821	17.74673	14.69538			31.39555
582	41.0263	17.54608	14.72388			31.31446
583	40.94265	17.45557	14.73905			31.33155
584	40.99706	17.63986	14.56602			31.55894
585	40.89471	17.49101	14.83474			31.46671
586	41.27394	17.58377	14.93843			31.34209
587	40.88694	17.52182	14.71972			31.66111
588	40.88305	17.59822	14.72188			31.35063
589	41.05647		14.8074			31.13199
590	41.05925		14.74706			31.47069
591	41.19435		14.7814			31.5341
592	41.03093		14.74606			31.52138
593	41.11569		14.62236			31.42318
594	40.82383		14.78023			31.62871
595	41.04074		14.69288			31.76328
596	40.98781		14.85075			31.4204
597	41.16252		14.88925			31.54225
598	40.94283		14.7859			31.41106
599	40.87287		14.72472			31.40251
600	40.95209		14.82457			31.65236
601	40.99095		14.85891			31.77004
602	40.93747		14.65037			31.83742
603	40.82735		14.83341			31.52754
604	40.89434		14.96994			31.52396
605	41.01945		14.81991			31.61281
606	40.96393		14.88059			31.72988
607	41.2421		14.9366			31.54841
608	41.1727		14.74456			31.62175
609	40.86343		14.85175			31.6303
610	41.07405		14.93276			31.77739
611	41.0859		14.91676			31.85372
612	41.28689		14.84091			31.66906
613	41.1181		14.81474			31.75712
614	40.81439		14.92943			31.7762
615	41.07091		14.88075			32.16618
616	41.32335		14.84574			31.6794

617	41.28467		15.07446			31.91693
618	41.11847		15.00811			31.60565
619	41.47882		14.95293			31.88234
620	41.17973		14.95894			31.9368
621	41.42052		14.88592			31.90262
622	41.52194		15.07579			32.0336
623	41.39701		15.05062			32.07932
624	41.49917		15.06546			31.89526
625	41.72793		15.20949			31.92369
626	41.64557		14.88492			31.78196
627	41.92244		15.09197			31.68934
628	41.84601		14.97977			32.03281
629	41.83046		15.04629			31.91037
630	42.34849		14.7754			31.67165
631	42.27835		15.05929			31.96105
632	42.06236		14.88292			32.05984
633	42.21672		15.11464			31.76546
634	42.51876		15.00361			31.94694
635	42.54893		14.96444			31.65892
636	42.14805		15.07763			31.9539
637	42.45528		15.04295			32.002
638	42.3198		14.90092			31.68476
639	42.17896		15.0883			32.14233
640	42.18655		15.00145			31.59154
641	41.84823		15.26267			31.79071
642	41.75588		15.10047			31.63944
643	41.57709		15.06246			31.83921
644			15.13664			31.60883
645			15.08596			31.59432
646			15.14331			31.95986
647			15.15498			31.87598
648			15.17815			31.74857
649			15.03579			31.50488
650			15.05646			31.44067
651			14.97194			31.84219
652			15.32335			31.64918
653			15.13764			31.62951
654			15.13948			31.6794
655			15.22599			31.45837
656			15.13948			31.59353
657			15.1018			31.65654
658			15.17348			31.67165
659			15.00728			31.5005

660			15.06496			31.30929
661			15.16081			31.65515
662			15.19182			31.5504
663			15.1053			31.63805
664			15.16932			31.582
665			15.30818			31.61678
666			15.13347			31.48103
667			15.11414			31.65833
668			15.30101			31.69848
669			15.15515			31.62076
670			15.15698			31.82708
671			15.23766			31.7108
672			15.27534			31.79608
673			15.30168			31.38303
674			15.40837			31.78196
675			15.22166			32.07356
676			15.2715			31.69609
677			15.18532			31.89745
678			15.32385			31.73545
679			15.34185			31.77322
680			15.22499			31.70981
681			15.32252			31.69073
682			15.32502			32.034
683			15.43971			32.00816
684			15.22599			31.92428
685			15.29151			32.08568
686			15.20732			31.67363
687						31.88711
688						32.03321
689						31.82847
690						31.84875
691						31.81774
692						31.97199
693						32.23158
694						31.92885
695						31.93323
696						32.05527
697						32.19004
698						32.04891
699						31.92309
700						32.10039
701						31.78455
702						32.13001

703						32.12941
704						32.05587
705						32.24589
706						32.50131
707						32.23774
708						31.98908
709						31.7921
710						31.85531
711						31.92766
712						32.08469
713						31.88174
714						31.90122
715						32.09423
716						32.08668
717						31.93839

Table Apx. 1. 3: Dominance effect of V2E on different percent helicity of WT:V2E

Wavelength (nm)	FPHM:V2E (100:0)	FPHM:V2E (0:100)	FPHM:V2E (1:1)	FPHM:V2E (3:1)	FPHM:V2E (9:1)
250	-757.28729	-343.98493	-1619.01074	-437.55179	-1027.28424
249.5	-886.7433	-316.26928	-1110.62156	-501.09215	-1012.87193
249	-975.07234	-348.75241	-1402.73439	-532.49914	-948.72217
248.5	-916.78534	-410.16295	-1638.45051	-511.91826	-885.20535
248	-1100.04125	-465.83439	-1889.37844	-590.06563	-945.51226
247.5	-1109.11434	-432.66098	-2201.98136	-540.07309	-1018.74277
247	-1035.43616	-403.88041	-2239.56136	-564.30486	-954.83844
246.5	-1006.69108	-477.43747	-2817.75214	-648.10539	-1029.27348
246	-1023.21816	-581.29565	-3520.20081	-704.55546	-1219.33632
245.5	-1138.0007	-628.20474	-2960.15025	-802.60936	-1270.85311
245	-1220.89889	-597.58113	-3077.8926	-896.14039	-1447.47567
244.5	-1190.29454	-672.98535	-3190.52578	-1029.85025	-1521.28745
244	-1272.01727	-746.65082	-2901.16336	-1139.34742	-1621.86356
243.5	-1560.01628	-930.73423	-2679.03015	-1281.59162	-1772.72287
243	-1778.4597	-980.36466	-2624.95661	-1377.33988	-1754.10927
242.5	-1837.19031	-1039.83883	-2405.68061	-1432.69607	-1981.42838
242	-2083.25139	-1281.4628	-2902.53411	-1607.0563	-2238.21472

241.5	-2305.89086	-1477.02851	-2795.41955	-1784.91313	-2375.28498
241	-2676.90956	-1655.0613	-2776.75416	-2038.82839	-2629.66874
240.5	-3079.81826	-1828.07135	-2949.63817	-2323.20238	-2856.73597
240	-3284.39351	-2085.05447	-2916.28615	-2528.45647	-3079.57283
239.5	-3691.56607	-2449.505	-3050.30842	-2872.37842	-3330.7822
239	-3998.76803	-2704.89621	-3091.27079	-3245.0082	-3602.97869
238.5	-4374.12406	-2934.50128	-3238.49324	-3526.31378	-3911.82758
238	-4886.77721	-3244.40157	-3859.69363	-3790.6651	-4204.20711
237.5	-5238.14368	-3586.75753	-4442.04118	-4073.11483	-4453.3788
237	-5725.87481	-3925.4082	-5076.52185	-4469.65048	-4867.40553
236.5	-6037.45649	-4163.97461	-5423.27788	-4765.24064	-5306.68527
236	-6750.81378	-4563.35102	-6297.47123	-5202.51506	-5654.25329
235.5	-7254.14237	-4902.28988	-7000.69428	-5515.09415	-6142.87652
235	-7601.29866	-5275.24887	-6849.19045	-5897.4319	-6371.80059
234.5	-8196.34703	-5687.79968	-7323.77367	-6480.96719	-7215.25773
234	-8849.32072	-6140.4089	-8067.78997	-6963.12361	-7844.67781
233.5	-9624.89828	-6589.0658	-8921.1995	-7485.86278	-8570.26603
233	-10333.45201	-7045.83318	-9299.13571	-8093.61597	-9267.08131
232.5	-10708.46896	-7404.54736	-9109.36652	-8499.09681	-9776.92094
232	-11556.15647	-7915.79638	-9749.08097	-9130.85988	-10267.15881
231.5	-12369.90822	-8411.05771	-10879.1512	-9843.66711	-10826.63257
231	-13076.14494	-8968.5818	-11397.27808	-10355.45015	-11328.26981
230.5	-13690.35106	-9433.32245	-11674.45504	-10873.64739	-11746.33315
230	-14272.20376	-9890.57015	-12119.0597	-11357.29467	-12208.50852
229.5	-14955.52466	-10365.57584	-12568.82694	-11863.80767	-12659.96267
229	-15711.09679	-10847.95097	-13316.86649	-12445.17601	-13221.89068
228.5	-16377.35092	-11285.28612	-13265.95281	-12996.06827	-13878.85657
228	-17073.89575	-11651.1776	-13638.2814	-13282.03715	-14513.73415
227.5	-17630.51562	-12018.46886	-13801.97068	-13768.77017	-15230.18349
227	-18217.14363	-12345.89384	-13954.88976	-14147.36342	-15566.54589
226.5	-18644.49116	-12670.94469	-14065.79615	-14438.49832	-16017.61252
226	-19077.91378	-13114.68863	-14862.88018	-14919.16387	-16325.65409
225.5	-19166.69492	-13424.09488	-14959.01092	-15214.14728	-16954.33144

225	-19548.40861	-13733.76187	-15220.61114	-15391.12692	-17269.57432
224.5	-19853.54785	-14018.93271	-15473.39938	-15703.09927	-17402.45942
224	-20050.57869	-14201.45303	-15444.11511	-15852.93128	-17596.0874
223.5	-20445.34676	-14454.2368	-15633.17223	-16227.24263	-17970.26474
223	-20879.16497	-14650.06875	-16127.44444	-16545.21311	-18146.48686
222.5	-21351.89204	-14729.38961	-15864.06402	-16639.76174	-18439.60913
222	-21470.25747	-14838.4901	-15600.77261	-16678.66294	-18539.87845
221.5	-21402.52724	-14979.56596	-15773.62991	-16909.86849	-18557.57494
221	-21433.63737	-14991.77972	-15760.63446	-17003.70636	-18743.25887
220.5	-21426.62982	-15140.81511	-15870.02768	-17133.30768	-18782.07488
220	-21517.92577	-15191.04251	-16416.81576	-17244.96659	-18765.34718
219.5	-21467.008	-15221.64554	-16414.32348	-17189.45784	-18725.17487
219	-21446.18315	-15275.30377	-16431.5024	-17128.33235	-18773.74332
218.5	-21657.28559	-15217.25407	-16612.81565	-17096.26139	-18810.81552
218	-21778.58967	-15240.8582	-16343.29355	-17165.22261	-18780.36336
217.5	-21738.63534	-15256.64003	-15807.18666	-17096.01869	-18913.15159
217	-21853.35571	-15336.37259	-16493.00827	-17070.25792	-19226.77982
216.5	-21831.90922	-15410.47859	-16318.54878	-17040.52728	-19405.84372
216	-21988.59013	-15548.26084	-16616.91011	-17177.94697	-19488.31967
215.5	-21978.75695	-15621.8179	-16784.96088	-17238.7951	-19495.19805
215	-21895.54229	-15741.89706	-17569.58352	-17324.53722	-19415.04718
214.5	-21991.16144	-15892.44201	-18149.30528	-17446.94425	-19261.75299
214	-22241.201	-16090.33246	-18893.60642	-17613.53984	-19161.22532
213.5	-22643.17442	-16159.77252	-18734.81268	-17740.95686	-19300.43983
213	-23127.82563	-16311.00364	-19405.76962	-18022.14109	-19646.97448
212.5	-23634.62973	-16452.4912	-19830.16903	-18364.52017	-19954.85459
212	-24393.62087	-16654.49865	-20063.82013	-18615.88708	-20510.38861
211.5	-25359.73032	-17099.40907	-20769.0459	-19123.82161	-20844.81344
211	-26113.7201	-17344.23332	-20958.72609	-19518.38099	-21762.05977
210.5	-26704.13445	-17803.55325	-21608.32065	-20147.66506	-22452.83628
210	-27235.88883	-18040.14349	-21769.60667	-20581.74972	-23089.00557
209.5	-27882.64614	-18389.40229	-21673.2089	-21032.47661	-23672.95732
209	-28368.71016	-18861.89662	-21836.09709	-21652.05271	-23914.15267

208.5	-28682.91966	-18893.04858	-21321.44161	-21905.49991	-24622.4965
208	-28873.93191	-18870.81679	-21318.59329	-22036.55742	-24738.71849
207.5	-29093.48298	-18747.85573	-20909.77062	-22037.07749	-24271.47314
207	-28886.36466	-18470.64442	-20288.39221	-21682.56346	-23861.9997
206.5	-28666.53104	-18076.23585	-19987.36059	-21178.78949	-23392.94595
206	-28397.8141	-17458.82314	-20406.06336	-20750.59895	-23036.36822
205.5	-27767.6432	-16626.50305	-19406.39269	-20106.0595	-22207.08764
205	-26695.14897	-15739.42686	-18437.60848	-19253.83898	-20917.3432
204.5	-24992.37081	-14823.53167	-17055.01705	-18353.94542	-20186.20062
204	-23336.83711	-13692.23506	-15558.04783	-17337.03623	-19128.67412
203.5	-21605.15281	-12382.30184	-14336.83142	-16261.9486	-17731.81428
203	-19640.07188	-11159.48433	-13170.00009	-14982.21362	-16441.48857
202.5	-17240.86193	-9686.22973	-11819.09619	-13240.5356	-14677.10372
202	-15185.53054	-7954.53735	-11039.19108	-11424.40097	-13092.00881
201.5	-13009.40368	-5943.79472	-9075.72076	-9635.37929	-11129.47498
201	-10655.09291	-3676.97472	-8102.69967	-7306.40414	-8760.47096
200.5	-7256.88322	-1315.56802	-5891.75501	-4720.74002	-6312.73695
200	-3814.00041	1236.03582	-3414.35018	-2047.84293	-3518.8558
199.5	570.01334	4254.98775	124.21515	849.37401	-17.58624
199	4421.48153	7221.60162	2938.56534	3829.82633	3159.83673
198.5	8488.88399	9884.68284	6279.88286	7203.18768	6603.11432
198	12499.26534	12621.12899	9405.41358	10332.91381	9909.51541
197.5	16699.07659	15365.60329	12993.31535	13227.58587	12521.71695
197	20234.41385	18144.85252	16637.82745	16297.48668	15572.843
196.5	23976.41733	20350.32922	19290.23472	19166.12059	18799.44844
196	27548.14865	22340.21238	21851.67383	21600.21912	22213.96601
195.5	30232.77499	24133.16573	22775.59703	23715.16835	25478.67703
195	32580.30426	25859.28644	23422.43229	25810.875	27529.04743
194.5	34339.25584	27439.93984	24337.89954	27634.2386	29271.79606
194	35260.97473	28514.88844	24025.47465	28935.45244	31432.51116
193.5	36032.93549	29277.49401	21790.70202	29504.75517	32393.93411
193	35613.33017	30003.59551	20550.34847	30375.35148	32589.3059
192.5	34824.41566	29844.67933	21932.04981	30830.93235	31585.45013

192	35598.63692	29779.63073	23243.5223	31643.62759	31426.79532
191.5	35441.53217	29418.98156	23549.00442	31403.87556	31561.87634
191	35610.50454	28828.05488	21096.42447	31154.93563	29669.35343
190.5	37397.42981	27413.59104	21778.32964	31212.66335	30584.27467
190	40713.58334	26005.7144	19437.8132	31503.20883	31179.69038
189.5	40516.07216	24663.43528	15559.82803	30962.16321	30297.41722
189	39520.3219	24160.47516	13890.26854	33685.59373	28883.82967
188.5	38272.52588	23165.53358	16490.69401	33675.53905	31144.65263
188	34585.08522	23389.49836	17924.8222	30158.65586	35738.50536
187.5	14544.39622	20671.04349	35378.6928	26010.23497	28677.18768
187	-1521.97771	16050.1231	51477.56504	17762.79978	7753.77342
186.5	15263.80035	34899.53149	151656.03	8217.92992	7470.92028
186	23608.83177	44074.53965	168235.0219	12532.47834	-12898.18708
185.5	29635.1553	43311.52238	179173.4537	13438.16201	-23623.32319
185	16805.23532	34489.89002	183981.7708	4217.29543	-46393.85661
184.5	26992.96984	34707.6793	249036.4674	-3063.78132	-65126.62029
184	47204.89172	47163.66171	274690.0229	-1493.59448	-30716.64309
183.5	28151.64564	39592.36214	259719.4407	3227.23916	-5694.61936
183	15213.87156	18415.75109	236543.922	1409.86502	-22770.43653
182.5	-14554.11637	2640.03974	189535.9912	-16725.62521	6022.13352
182	-9707.91514	5362.26852	182890.5089	-15715.16488	37171.33944
181.5	6116.99783	15071.37505	190192.8846	-2828.38054	54109.26611
181	5361.8778	6426.1424	103513.2224	-43.2306	65393.03637
180.5	8617.87377	1602.2402	23210.23258	-2346.3108	42901.38407
180	15982.58285	7104.51415	16328.42889	5328.63191	29985.5328

Table Apx. 1. 4: Mean residue molar ellipticity of FPHM at 22-100 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	90°C	100°C
260	-31.18298	49.22458	348.53839	1847.65615	325.7019
259.5	-65.66885	798.00679	280.98404	1811.28566	289.91957
259	20.1111	826.80282	394.60098	1931.55712	343.13937
258.5	44.0191	746.62436	374.01659	1930.46374	245.27586

258	9.31214	707.79062	399.35151	1970.39085	226.51753
257.5	-121.48737	698.32349	332.39412	1886.7915	185.44175
257	-85.12919	746.53638	362.0925	1858.22546	205.09363
256.5	34.95765	846.61179	509.84542	1879.03733	280.06786
256	132.69323	789.81903	468.91416	1756.45344	181.48548
255.5	52.95802	719.42315	472.05605	1530.81563	79.88953
255	3.07145	575.93817	340.24255	1389.29245	-64.02601
254.5	-97.37539	605.0798	308.76712	1344.99183	-53.13636
254	-219.25223	528.53714	122.61242	1262.0837	-113.61405
253.5	-214.02539	548.30464	127.61719	1309.08634	-68.98065
253	-190.28026	498.05203	58.96531	1247.90122	-120.88199
252.5	-15.03959	628.16639	105.35855	1295.08609	-79.9765
252	-10.92233	589.31884	146.87571	1294.3069	-83.91731
251.5	-106.45733	508.97449	119.51979	1221.63378	-26.67136
251	-67.71824	406.9951	249.5903	1222.9672	83.93264
250.5	-39.43471	350.15709	145.45557	1154.55699	20.66784
250	-40.65112	355.60261	84.68493	1134.22647	-50.58389
249.5	-172.65804	308.66407	-93.53814	1130.89355	-190.30916
249	-235.17029	302.35265	-167.07176	1122.48712	-259.58024
248.5	-326.31268	121.64974	-202.26593	968.05957	-304.76059
248	-407.43873	131.02426	-294.36974	758.77089	-449.442
247.5	-510.7817	-71.76184	-371.12228	442.65678	-571.76071
247	-528.42277	-96.90625	-519.94093	290.34309	-655.65917
246.5	-563.16577	-161.93163	-612.49843	232.44439	-818.68166
246	-547.70894	-169.0612	-694.74425	145.42918	-868.49315
245.5	-593.19593	-240.89732	-763.69737	88.9109	-1016.8003
245	-746.85811	-395.67551	-956.79276	-161.75066	-1115.7396
244.5	-960.58565	-577.85472	-1112.52733	-380.9388	-1278.01935
244	-1181.50434	-819.92962	-1321.11348	-471.31834	-1509.0235
243.5	-1344.41372	-1005.05216	-1501.57094	-714.73043	-1743.6471
243	-1598.74324	-1285.22056	-1758.12492	-1043.43597	-1995.17406
242.5	-1699.44703	-1381.5257	-1935.70441	-1274.11085	-2020.23376
242	-1880.5203	-1557.58452	-1987.77177	-1454.4552	-2215.03079

241.5	-2116.21214	-1757.03154	-2187.92258	-1607.1635	-2468.38004
241	-2456.66709	-2002.8277	-2406.00729	-1833.85698	-2889.25474
240.5	-2776.59922	-2251.27561	-2661.70667	-2154.34209	-3121.94294
240	-3009.85296	-2496.31771	-2948.24683	-2463.39073	-3394.16866
239.5	-3276.71233	-2744.5017	-3233.75644	-2794.21893	-3615.50836
239	-3682.87043	-3125.57497	-3737.75292	-3197.62473	-3937.28792
238.5	-4164.73545	-3607.89242	-4239.56265	-3738.44414	-4321.16376
238	-4563.79289	-4146.58791	-4522.44565	-4104.10959	-4745.10494
237.5	-4959.11776	-4503.35554	-4830.02388	-4415.74714	-5033.06523
237	-5283.59935	-4874.53814	-5053.5629	-4561.31708	-5327.4978
236.5	-5704.04675	-5277.62976	-5490.78799	-4875.97084	-5644.90386
236	-6231.98442	-5765.61518	-5931.77077	-5297.08433	-6042.45319
235.5	-6762.38532	-6281.41259	-6426.85686	-5815.40782	-6435.44049
235	-7392.67312	-6743.21981	-6869.32261	-6154.15358	-6738.19279
234.5	-7933.26631	-7188.95312	-7181.80219	-6532.71333	-7017.09187
234	-8824.98429	-7774.89003	-7627.09564	-6871.30828	-7473.96004
233.5	-9482.82016	-8199.23338	-8013.7112	-7283.43597	-7808.0558
233	-10162.18424	-8786.13799	-8637.43873	-7918.56227	-8250.50899
232.5	-10611.68782	-9375.02828	-9170.96896	-8441.07076	-8627.9628
232	-11121.20146	-9892.47204	-9719.02727	-8904.28553	-9029.23212
231.5	-11875.49328	-10543.21981	-10261.80721	-9466.68342	-9671.0318
231	-12525.85145	-11070.30288	-10738.62008	-9848.71183	-10203.16702
230.5	-13157.97411	-11492.73596	-11141.03305	-10224.50672	-10580.64597
230	-13746.63818	-11988.92799	-11540.59319	-10645.74588	-10963.31532
229.5	-14385.44678	-12495.71447	-11929.96104	-11127.18361	-11225.39902
229	-15040.09049	-13034.68644	-12312.55498	-11537.92887	-11657.23263
228.5	-15586.27623	-13661.17884	-12782.4557	-11949.46588	-11949.7298
228	-16046.62561	-14159.48222	-13235.64157	-12369.77504	-12321.79213
227.5	-16629.75996	-14665.57748	-13620.58565	-12714.96795	-12658.66533
227	-17180.093	-15174.9403	-14140.63089	-13085.71069	-13037.954
226.5	-17796.02865	-15664.06937	-14453.43723	-13419.50484	-13335.93063
226	-18277.74287	-16051.65263	-14655.39776	-13695.36257	-13490.63717
225.5	-18657.7856	-16320.22119	-14911.65012	-13920.82443	-13676.38557

225	-19176.44841	-16642.95589	-15165.51464	-14135.22684	-14061.0783
224.5	-19626.74375	-16979.76624	-15719.61795	-14368.22923	-14398.26568
224	-19915.29471	-17291.56717	-15891.16501	-14602.99108	-14539.52495
223.5	-20152.44439	-17368.85761	-16226.71861	-14853.96506	-14604.24783
223	-20186.37678	-17616.56403	-16242.30238	-15061.45532	-14739.97738
222.5	-20246.70102	-17828.20158	-16330.14955	-15057.93641	-14972.60274
222	-20281.38746	-17902.09878	-16252.10506	-14985.79867	-14933.89468
221.5	-20599.59784	-18044.23778	-16313.81174	-14977.88111	-15132.96469
221	-20705.79364	-18117.25525	-16332.66306	-15235.64157	-15243.30778
220.5	-20805.95702	-18189.77001	-16568.55599	-15410.83323	-15434.83725
220	-20695.86528	-18333.29144	-16609.77755	-15523.18713	-15392.61028
219.5	-20684.93151	-18206.73621	-16869.04612	-15399.39676	-15180.97273
219	-20698.37879	-18230.8659	-16893.17582	-15538.77089	-15278.24557
218.5	-20877.34071	-18493.02501	-17101.92284	-15784.46651	-15416.36295
218	-20908.75958	-18592.68569	-17035.31482	-16061.581	-15612.91944
217.5	-20904.10959	-18463.74262	-16935.40279	-16138.49441	-15616.94106
217	-20737.21252	-18319.34146	-16969.96355	-15980.26895	-15802.94081
216.5	-20954.37979	-18437.47644	-17015.08106	-16133.21604	-15922.70956
216	-21113.48498	-18450.04399	-17306.77391	-16326.12794	-16029.78509
215.5	-21266.05505	-18907.1258	-17367.85221	-16506.97499	-16211.51188
215	-21474.55071	-18923.33794	-17591.68028	-16676.7626	-16467.01018
214.5	-21609.5262	-19063.34045	-17529.09388	-16675.12882	-16621.3397
214	-21845.0421	-19360.31168	-17972.35139	-17058.06208	-16925.97713
213.5	-22220.68619	-19527.58577	-18233.88212	-17362.19681	-17259.01722
213	-22599.22081	-20123.91605	-18673.49504	-17842.27724	-17737.84089
212.5	-22903.22986	-20370.61707	-19135.60387	-18257.88614	-18119.0147
212	-23338.82116	-20786.60299	-19769.76247	-18607.89242	-18408.19404
211.5	-23912.15282	-21407.18864	-20302.75229	-18952.36898	-18621.59105
211	-24727.28415	-22199.32135	-20913.2839	-19399.89946	-19040.71886
210.5	-25384.69272	-23016.21214	-21516.77768	-20082.94583	-19634.1586
210	-26119.39173	-23588.41272	-22275.10368	-20914.41498	-20299.35905
209.5	-26696.2423	-24136.10657	-22907.00013	-21696.2423	-20837.12454
209	-27269.57396	-24705.79364	-23303.50635	-22379.163	-21450.92371

208.5	-27654.26668	-25209.62674	-23678.52206	-22942.94332	-21937.53927
208	-28169.41058	-25673.99774	-24047.75669	-23269.57396	-22779.94219
207.5	-28780.69624	-25690.0842	-24076.78773	-23285.03205	-23225.21051
207	-29155.9633	-25562.90059	-24174.81463	-23196.43082	-23222.94835
206.5	-29057.30803	-25130.45118	-23850.82317	-23011.43647	-22922.08119
206	-28271.83612	-25013.94998	-23530.09928	-22878.47179	-22711.70039
205.5	-27691.96934	-24273.09287	-23240.54292	-22835.86779	-22294.45771
205	-26281.01043	-23673.62071	-22316.5766	-22146.28629	-21688.32475
204.5	-25282.14151	-22603.87081	-21215.03079	-21345.60764	-20674.24909
204	-23822.42051	-21412.59269	-20107.07553	-20258.64019	-19833.2286
203.5	-21563.52897	-19944.0744	-19036.19455	-19211.13485	-19006.40945
203	-20015.70944	-18601.86	-17864.77316	-17777.05165	-17776.67463
202.5	-17553.97763	-17372.87923	-16279.1253	-16014.95539	-16792.88677
202	-15396.75757	-15474.04801	-13831.2178	-13643.70994	-14827.0705
201.5	-12979.01219	-13510.36823	-11873.9349	-11366.68342	-12178.96192
201	-10190.26015	-10257.69762	-9747.21629	-9161.71924	-10384.90637
200.5	-7201.04311	-6779.48976	-7883.49881	-7166.95991	-7919.09011
200	-4126.81915	-2992.32123	-5058.22546	-5717.0793	-7224.31821
199.5	-712.98228	-73.87382	-2225.80118	-2974.81463	-5343.89845
199	2508.28202	2373.94747	1038.791	-1098.6603	-2304.63743
198.5	6632.51225	5508.89783	3109.01093	939.256	1297.57446
198	9878.96192	8940.59319	5098.47933	1924.88375	4904.28553
197.5	14596.2046	12393.21352	7148.44791	4066.64572	7218.63768
197	18370.36572	15576.34787	11149.64182	7228.47807	10983.22232
196.5	21813.2462	17538.64522	15338.82116	13238.40643	11013.76147
196	25121.15119	20455.19668	17652.1302	15772.15031	10822.45821
195.5	27507.72904	22867.66369	18720.8747	10897.02149	2221.3397
195	28412.96971	26347.8698	17485.10745	7468.09099	-7699.68581
194.5	29374.76436	27246.82669	17955.3852	3499.79892	-14473.92233
194	30425.03456	30918.05957	18785.34624	1550.00628	-14487.99799
193.5	32228.22672	31719.61795	21369.73734	-11170.59193	-2165.71572
193	33531.60739	28930.7528	24598.34108	-9394.82217	-8028.84253
192.5	35293.95501	25147.29169	25548.44791	-34938.419	-8492.72339

192	35777.42868	20949.7298	2047.93264	-19767.87734	-14450.67236
191.5	34291.81852	18937.9163	-21534.1209	-24938.79603	7400.61581
191	33081.81475	16964.05681	-39647.60588	-2211.39877	3905.63026
190.5	31152.69574	26189.64434	-49706.17067	1383.20975	-3215.19417
190	23086.33907	31080.80935	-31958.02438	741.82481	-13248.3348
189.5	19087.34448	10433.01496	-10213.08282	7941.96305	-12195.35001
189	23001.75946	-9073.11801	16988.6892	10315.11876	-21548.57358
188.5	19706.29634	-29511.24796	42786.47732	5092.64798	-23134.72414
188	17659.2937	-911.2379	56469.27234	-180.20862	-27933.64333
187.5	-1993.15068	4126.05253	32172.9295	2970.69247	-5383.10921
187	-3530.38834	-5530.60199	8477.42868	9607.71648	849.56265
186.5	-18333.29144	4340.50522	-2227.64861	13517.02903	25077.79314
186	-7121.3774	9519.4043	8264.04424	22754.30439	31919.06497
185.5	-1821.21403	24133.59306	21623.97889	22890.91366	27793.51514
185	13630.76536	39804.32324	30776.8003	14758.95438	17278.49692
184.5	18877.96908	52671.6099	25608.5208	5760.21113	12974.61355
184	10215.73457	27442.37778	9312.07742	-10529.53374	-7383.02124
183.5	-13670.22747	19328.01307	16785.22056	-3893.72879	-2720.4097
183	-8674.41247	-832.27598	25993.46487	-5976.68719	-18830.71509
182.5	1392.22069	13384.8184	25599.59784	-11201.30703	-12489.98366
182	5197.92635	17550.71007	26799.04487	-12373.87206	-21937.9163
181.5	-6337.82833	8903.45608	15657.65992	-27266.55775	-21683.54908
181	-28683.80043	-6141.7117	2124.84605	-20057.30803	-25192.4092
180.5	-38633.40455	-12106.93729	1375.44301	-16579.48976	-21794.2692
180	-35833.35428	-21120.52281	-12170.03896	-11516.81538	-10625.38645

Table Apx. 1. 5: Mean residue molar ellipticity of V2E_FPHM at 22-100 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	90°C	100°C
260	-35.19784	297.8069	1609.22023	338.78556	2564.67334
259.5	-56.4373	268.24025	1571.48314	320.01581	2501.25132
259	15.14094	246.22366	1596.70706	279.91438	2518.11117
258.5	27.71048	217.53161	1666.12223	248.07165	2439.8314
258	57.82205	228.3588	1719.52055	232.69099	2380.72972
257.5	116.92716	265.9128	1714.09378	160.74552	2261.07745
257	116.2612	207.1009	1667.22866	132.36301	2204.74183
256.5	184.05032	176.41992	1666.84668	177.85037	2265.38462
256	152.51844	101.86196	1727.10748	177.91754	2230.24236
255.5	-15.6956	47.66293	1636.97313	202.94257	2170.3372
255	-187.70548	-25.81718	1585.89305	157.94125	2053.53003
254.5	-291.87434	-42.0133	1478.63541	63.79399	1942.87408
254	-333.63145	-155.82323	1384.52318	-110.06349	1764.47576
253.5	-245.30558	-178.21391	1406.28293	-120.46378	1847.78714
253	-247.69362	-206.96918	1388.04004	-108.69139	1766.01686
252.5	-149.29795	-153.24289	1483.7197	-46.83285	1875.02634
252	-117.37869	-104.42848	1478.91201	-9.75313	1752.00211
251.5	-105.96944	-45.26791	1492.13646	12.33646	1675.80348
251	-22.10774	52.91399	1491.14858	-15.34049	1641.31981
250.5	-46.96286	8.40788	1393.8883	-46.76185	1594.8235
250	-130.69797	-55.42966	1328.0295	-99.16135	1584.33878
249.5	-234.07271	-84.16122	1270.54136	-87.49144	1525.50053
249	-244.61802	-130.52713	1231.80585	-124.42848	1392.93994
248.5	-328.43783	-168.85933	1216.86907	-281.10248	1267.46839
248	-446.14594	-327.3617	1119.81955	-367.32086	1089.08983
247.5	-508.64199	-466.22497	932.67387	-489.85379	956.19995
247	-478.36275	-427.36038	770.19758	-521.96523	918.46286
246.5	-474.05427	-435.67571	741.24605	-471.30796	821.37645
246	-552.55005	-504.30717	658.64067	-544.05822	807.7687

245.5	-714.58904	-645.68098	545.54136	-631.43177	651.69257
245	-850.40832	-811.14331	406.25	-889.43098	555.48604
244.5	-925.58483	-946.27239	236.14989	-984.9157	315.8746
244	-1090.08035	-1069.61407	36.62421	-1172.02582	171.61222
243.5	-1157.35116	-1259.63383	-221.02608	-1305.03556	-68.12526
243	-1288.04663	-1421.53583	-486.74131	-1534.4705	-295.61512
242.5	-1412.22339	-1512.67123	-583.97655	-1584.40464	-383.49052
242	-1552.55532	-1581.63857	-627.54215	-1661.9863	-549.41649
241.5	-1787.53952	-1744.17808	-817.88462	-1763.47471	-723.96075
241	-2037.55269	-1991.2803	-1135.49131	-2029.0569	-1056.86249
240.5	-2256.46733	-2163.85669	-1341.74131	-2352.27871	-1186.7255
240	-2586.73604	-2290.84563	-1586.30137	-2553.3588	-1258.57086
239.5	-2710.24763	-2530.74289	-1748.95943	-2668.07165	-1426.23815
239	-3154.33351	-2913.06639	-2190.62171	-3028.89884	-1779.67597
238.5	-3489.72603	-3400.39515	-2570.5216	-3427.60801	-2109.73393
238	-3955.70337	-3730.2687	-2988.15859	-3689.55479	-2350.72445
237.5	-4185.72181	-3983.07429	-3194.36249	-3872.22076	-2609.48367
237	-4460.78767	-4214.34405	-3440.5295	-4156.08535	-2807.2313
236.5	-4794.13857	-4639.85774	-3737.72392	-4477.77924	-3272.70811
236	-5159.90516	-5036.22234	-4052.26554	-4845.81138	-3637.60537
235.5	-5604.45205	-5568.30875	-4533.46944	-5209.54953	-3952.56849
235	-6035.78767	-5886.90727	-4929.39937	-5378.92518	-4301.18546
234.5	-6492.62381	-6177.44995	-5315.51633	-5564.48894	-4438.97524
234	-7154.42571	-6553.67492	-5708.75922	-5939.89726	-4871.79926
233.5	-7553.84615	-6889.42308	-6005.6902	-6214.56797	-5085.22129
233	-8158.3509	-7522.23393	-6488.68546	-6710.47155	-5443.45364
232.5	-8615.05532	-8104.61012	-6906.57271	-7147.2471	-5672.89252
232	-9226.10643	-8599.01212	-7317.74236	-7548.64331	-5883.49579
231.5	-9896.95732	-9048.59062	-7752.81876	-8036.03793	-6370.81138
231	-10418.71707	-9457.96891	-8132.91623	-8388.77766	-6558.57482
230.5	-10890.50316	-9856.70443	-8475.6059	-8748.72234	-6780.00527
230	-11259.16754	-10276.50158	-8904.3862	-8971.98367	-6972.43151
229.5	-11798.19547	-10833.12698	-9295.79821	-9308.50896	-7266.63593

229	-12411.94679	-11409.16754	-9715.75342	-9682.19178	-7626.34352
228.5	-13148.34036	-11820.6138	-10057.77134	-10076.79136	-7961.34089
228	-13729.58377	-12022.61591	-10454.33351	-10388.46154	-8293.90148
227.5	-14209.03583	-12348.30084	-10507.07323	-10696.94415	-8510.53741
227	-14694.02002	-12826.47524	-10936.94679	-11051.1196	-8792.66333
226.5	-15057.56059	-13380.2687	-11146.48314	-11247.5764	-8936.43309
226	-15569.28346	-13802.95047	-11638.39568	-11512.42097	-9289.89726
225.5	-15961.8019	-14061.11697	-11884.15437	-11597.51054	-9568.66438
225	-16385.27397	-14401.2118	-12136.4726	-11939.81823	-9828.39831
224.5	-16656.48051	-14644.36249	-12466.12223	-12299.80242	-10075.94837
224	-17008.56164	-14802.4236	-12598.82771	-12491.39884	-10170.96944
223.5	-17268.57218	-14999.47313	-12717.09694	-12673.03741	-10214.87092
223	-17628.95153	-15142.65016	-12831.23024	-12585.2608	-10283.73288
222.5	-17765.27924	-15294.1254	-12876.68599	-12660.52424	-10305.15016
222	-17788.1981	-15259.22023	-12821.62803	-12632.37619	-10250.25026
221.5	-17840.75342	-15354.97893	-12944.75764	-12888.32982	-10417.29452
221	-17844.17808	-15377.10748	-13053.64858	-13037.48683	-10642.43941
220.5	-17689.40991	-15404.63646	-13189.93678	-12976.62013	-10652.98999
220	-17563.35616	-15468.51949	-13300.57956	-12817.83456	-10686.60432
219.5	-17580.61117	-15269.36249	-13194.54689	-12789.10695	-10579.03056
219	-17638.17176	-15200.6059	-13354.97893	-12819.42835	-10731.73077
218.5	-17828.89884	-15177.4236	-13346.28556	-13096.58851	-11011.18282
218	-17848.12961	-15038.72497	-13422.68177	-13141.10906	-11030.82192
217.5	-17790.17387	-15169.1254	-13472.47102	-13047.78714	-11067.72919
217	-17683.3509	-15168.07165	-13477.73973	-12972.31296	-10973.23498
216.5	-17619.20443	-15314.27819	-13497.62908	-13150.90885	-11037.39463
216	-17730.5058	-15486.16965	-13606.55954	-13270.15279	-11230.42677
215.5	-17918.46681	-15776.08008	-13787.53952	-13443.36143	-11485.0764
215	-18082.19178	-16025.81665	-13979.58377	-13555.84826	-11692.11012
214.5	-17992.09694	-16048.99895	-13815.72708	-13578.63541	-11842.26818
214	-18156.61222	-16375.92202	-14011.59115	-14037.67123	-12088.90938
213.5	-18218.78293	-16462.98736	-14211.14331	-14166.22761	-12361.8019
213	-18478.39831	-16697.44468	-14629.74183	-14444.41517	-12587.52634

212.5	-18799.52582	-16842.59747	-14920.70601	-14725.89568	-12758.86459
212	-18991.70179	-17142.65016	-15411.35406	-15088.51423	-13036.32771
211.5	-19454.16228	-17738.93572	-15811.3804	-15642.51844	-13368.41412
211	-19764.88409	-18160.56375	-16175.71128	-16038.59326	-13834.82613
210.5	-20101.0274	-18541.49104	-16615.51633	-16505.66386	-14299.13066
210	-20725.23709	-19001.31718	-17300.05269	-16850.89568	-14660.9589
209.5	-21192.96628	-19464.8314	-17836.40674	-17090.22655	-15018.83562
209	-21699.42044	-20026.60695	-18253.95153	-17278.451	-15451.65964
208.5	-21907.00738	-20678.47734	-18431.1117	-17600.76396	-15645.28451
208	-22330.8746	-21044.1254	-18601.0274	-17987.35511	-16160.03688
207.5	-22544.9157	-21071.25922	-18439.14647	-17859.45732	-16077.44995
207	-22481.03267	-20670.44257	-18438.09273	-17658.58799	-16127.63435
206.5	-22179.26765	-20043.86196	-18006.84932	-17665.04215	-15930.18967
206	-21441.38567	-19572.70811	-17728.00316	-17579.95258	-15440.59536
205.5	-20657.00738	-19043.86196	-17218.51949	-17148.05058	-15115.64805
205	-19909.77345	-18194.67861	-16390.14752	-16250.13172	-14753.81981
204.5	-18309.79979	-17299.65753	-15755.79557	-15782.27081	-14039.25184
204	-16950.34247	-15861.43309	-14741.96523	-14797.81349	-12994.8235
203.5	-15336.8019	-14735.64278	-13873.28767	-13508.82508	-11968.91465
203	-14012.64489	-13358.00843	-12636.92044	-12131.33562	-11085.41886
202.5	-12270.20548	-12039.76554	-10869.03319	-10530.22919	-10385.41886
202	-10098.52476	-10102.29189	-9115.92466	-8686.39357	-9102.68704
201.5	-7814.60748	-7840.79294	-7301.18546	-7166.74131	-7251.59378
201	-5032.48156	-5486.77555	-4907.53425	-5473.49842	-5387.23656
200.5	-2139.98946	-2822.74763	-2651.43572	-4167.59747	-3889.14647
200	962.34589	-276.94547	-1078.09405	-2314.40991	-2341.20126
199.5	4236.60432	2414.58114	1617.24183	265.2608	-429.56006
199	7098.98577	5688.1981	3748.24816	2338.27713	1953.30611
198.5	10662.76344	8408.54847	6185.7745	4550.26344	4837.73709
198	13938.6196	11637.5922	9317.86091	6993.2824	6621.79926
197.5	16940.72708	14522.91886	11854.49157	9518.57218	8317.13646
197	19833.1138	17240.38462	14758.69336	12604.91307	10761.8019
196.5	22406.08535	19691.25395	17147.39199	14136.196	12520.16596

196	24859.85248	21455.21602	19641.4647	14596.68072	15168.86196
195.5	27103.53003	22707.71865	20328.24025	13240.77977	14917.28135
195	29079.82086	23593.91465	22766.85985	13905.82192	17794.1254
194.5	31509.35195	25818.098	22931.1117	16791.49104	19537.93467
194	33350.23709	27929.6628	26076.92308	16912.01264	17536.09062
193.5	34314.93678	29533.7197	24732.34984	23258.56164	16740.64805
193	34754.08325	30617.62381	26658.19283	13072.90569	10253.64858
192.5	33848.91992	30893.30875	21752.50263	13385.80084	13858.93045
192	33613.54057	28857.48156	19696.25922	28368.80927	15855.11064
191.5	34024.89463	26795.04742	6184.8393	36057.16544	9181.16438
191	32559.00948	28506.05901	1656.92835	35302.29189	12194.23077
190.5	32929.92624	23036.09062	-10127.95047	17596.81243	3870.31085
190	31107.08641	20782.66596	-12752.81876	-1874.09115	11030.63751
189.5	26133.16649	11235.2608	-25134.87882	-7905.40042	-1302.36433
189	22013.30348	-9444.69178	-35953.37197	-1119.4705	-6315.75342
188.5	22512.38145	-7268.03214	-6101.89673	6562.81612	-16815.06849
188	33714.69968	-8750.21075	6511.05111	11954.32034	-21559.27292
187.5	22030.55848	757.82534	8982.99526	8834.37829	-30275.68493
187	21200.6059	9724.55216	4004.54426	1398.61697	-37025.68493
186.5	13853.92518	-5497.90569	3608.61433	-2476.43572	-28661.09062
186	11876.55427	-20118.41412	18998.94626	13027.47629	-19599.71022
185.5	36515.01581	-14985.90622	36521.20653	18520.67966	3626.76502
185	37041.8862	16648.57745	28042.93994	5702.05479	15825.6059
184.5	55903.05585	35515.01581	22942.57113	9550.03952	22194.02002
184	31446.25922	2316.25395	-4964.01475	-19658.32455	-18552.02845
183.5	14479.58377	-15437.30242	-25134.87882	-9631.82297	-11616.2803
183	-11632.69231	-22314.93678	-25608.66702	-19254.61012	-25440.33193
182.5	-6042.83456	3217.05743	-191.24737	-6634.73393	-14797.1549
182	-13082.67914	18012.90832	7888.68546	-1946.6412	-18548.34036
181.5	-5703.451	13502.89779	57.7122	2097.97155	-23105.90095
181	-15810.06322	-870.43072	-9407.37619	-827.81349	-19180.97998
180.5	929.14515	-9587.55269	2105.79557	-8999.20969	-21371.83878
180	-9283.45627	-22702.71338	152.1549	-6122.83983	-11973.66965

APPENDIX 2 (Chapter 4- Extension of Project 1): Expression, purification, characterization and fusion study of HIV gp41 ectodomain WT, V2E, L9R and G10V to confirm the role of hairpin and correlation between helicity and fusion.

Table Apx. 2. 1: Best-fit parameters of vesicle fusion

Lipid: Protein 100:1	Single Exponential Buildup $M(t) = M_s(1 - e^{-k_s t})$							Two Exponentials Buildup $M(t) = M_f(1 - e^{-k_f t}) + M_s(1 - e^{-k_s t})$										
	k_s (ms ⁻¹)	Error	C	Error	M_s	Error	R ²	K_f (ms ⁻¹)	Error	M_f	Error	c	Error	M_s	Error	K_s (ms ⁻¹)	Error	R ²
pH 3.12																		
WT	64.77	0.958 7	4.137 42	0.21	78.63	0.045 78	0.963 43	74.52	0.5643	76.35 85	0.077 19	3.195 6	0.08	696.9 161	1611 2.917 99	8.49	0.196 85	0.993 9
G10V	29.61	0.275 4	13.95 448	0.31	89.54 43	0.043 85	0.985 37	202.3	11.56	50.71 18	0.511 89	1.848 4	0.19	38.98 818	0.517 65	24.42	0.258 89	0.994 33
L9R	5.9	0.051 12	18	0.71	16.82 82	0.032 38	0.993 14	13.7	0.3703	10.56 59	0.093 4	3.887 0	0.28	8.692 3	0.256 54	2.35	0.131 09	0.999 03
V2E	8.24	0.083 14	25.80 198	0.83	21.01 54	0.031 3	0.986 83	28.98	1.28	12.59 74	0.222 93	5.263 8	0.45	9.066 9	0.254 82	5.34	0.124 89	0.996
pH 4.23																		
WT	72.9	0.298 8	3.155 26	0.05	78.72 625	0.010 29	0.995 88	72.9	16961. 70465	39.36 312	-	3.155 27	0.05	39.36 312	-	72.9	1696 1.704 65	0.995 87
G10V	40.76	0.439 3	9.420 27	0.26	88.67 475	0.037 84	0.974 76	40.75	14.060 84	44.33 739	2904 73.30 604	9.420 9	0.47	44.33 739	2904 73.30 604	40.75	14.06 084	0.974 71
L9R	6.93	0.050 47	18.66 703	0.69	40.41 381	0.040 78	0.988 9	14.6	0.1849	17.36 823	0.245 13	2.659 42	0.18	24.81 303	0.287 47	3.13	0.058 329	0.999 1
V2E	8.81	0.173 9	17	1.61	36.11 445	0.082 19	0.891 71	23.34	0.3078	22.48 366	0.097 21	16.69 841	0.34	18.09 404	0.053 19	2.16	0.029 175	0.998 35
pH 5.13																		
WT	74.86	0.567 4	4.014 37	0.1	83.13 865	0.020 73	0.988 85	793.5 6	64.34	29.05 193	0.402 79	- 0.120 27	0.07	54.11 656	0.401 56	66.82	0.559 15	0.994 09
G10V	68.68	0.933 1	4.474 34	0.19	87.67 444	0.040 83	0.965 03	68.67	16.031 76	43.83 724	1.474 47E6	4.475 7	0.31	43.83 726	1.474 47E6	68.68	16.03 176	0.964 94
L9R	8.26	0.085 69	19.39 393	0.85	37.61 176	0.054 24	0.965 03	20.73	0.1591	22.80 943	0.127 89	1.378 66	0.1	17.07 34	0.096 47	3.44	0.038 271	0.999 62
V2E	7.42	0.057 86	22.33 755	0.69	48.69 761	0.056 81	0.990 56	15.3	0.4133	29.16 793	0.786 27	7.557 54	0.35	21.96 154	0.650 7	3.46	0.143 24	0.997 88
pH 6.3																		
WT	88.29	1.66	3.316 26	0.2	80.00 825	0.050 85	0.947 04	160.9 6	1.18	69.74 008	0.140 16	0.777 81	0.02	10.86 221	0.136 75	15.72	0.218 20	0.998 01
G10V	88.65	1.53	2.542 38	0.17	79.58 201	0.044 78	0.945 83	447.0 7	14.05	32.13 219	0.539 93	- 0.836 59	0.02	47.62 454	0.542 49	46.67	0.787 6	0.988 2
L9R	4.74	0.032 94	16.32 142	0.67	40.59 389	0.067 01	0.994 98	8.45	0.0879 5	36.55 18	2.835 95	3.363 46	0.14	27.07 303	0.323 93	0.615	0.078 656	0.999 79
V2E	4.88	0.054 31	70.08 426	1.46	38.59 874	0.078 34	0.987 72	24.65	0.7747	16.66 278	0.211 01	16.91 239	0.63	24.43 492	0.122 85	3.01	0.055 4967	0.997 87
pH 7.45																		
WT	65.32	0.808 2	1.503 98	0.14	72.46 869	0.042 82	0.975 46	65.31	104.48 272	36.23 435	5925 47.80 01	1.504 14	0.20	36.23 435	5925 47.80 01	65.31	104.4 8272	0.975 38
G10V	51.94	0.478 3	3.382 2	0.14	76.32 948	0.034 37	0.985 58	57.66	0.3732	74.34 064	0.096 22	2.665 51	0.07	5.641 17	0.790 37	1.17	0.278 98	0.996 18
L9R	5.47	0.032 16	7.407 73	0.49	18.14 926	0.024 18	0.996 18	8.63	0.1714	12.81 301	0.331 85	- 0.660 44	0.21	10.40 067	0.720 83	1.03	0.193 72	0.999 38
V2E	3.13	0.014 66	11.80 266	0.48	14.63 706	0.021 8	0.998 26	3.13	13.986 39	7.318 53	4475 72.82 033	11.80 266	0.67	7.318 53	4475 72.82 033	3.13	13.98 639	0.998 25
pH 8.4																		
WT	9.49	0.218 5	47.64 766	2.23	10.82 108	0.024 92	0.924 81	46.51	1.34	7.307 15	0.064 76	2.646 04	0.33	4.265 08	0.041 95	3.41	0.332 67	0.986 71
G10V	16.78	0.414 9	17.19 119	1.3	25.14 127	0.045 4	0.885 17	48.86	0.3281	20.20 715	0.036 51	- 0.827 01	0.07	7.434 8	0.034 25	2.2	0.040 09	0.997 83
L9R																		
V2E	45.36	3.33	7.366 39	1.5	8.738 95	0.031 02	0.552 41	45.38	145.16 747	4.369 48	6.808 1E6	7.365 69	2.62	4.369 48	6.808 1E6	45.34	209.2 0284	0.550 94

Lipid:Protein 600:1	Single Exponential Buildup $M(t) = M_s(1 - e^{-k_s t})$							Two Exponentials Buildup $M(t) = M_f(1 - e^{-k_f t}) + M_s(1 - e^{-k_s t})$										
	k_s (ms ⁻¹)	Error	C	Error	M_s	Error	R ²	K_s (ms ⁻¹)	Error	M_s	Error	c	Error	M_f	Error	K_f (ms ⁻¹)	Error	R ²
pH 3.12																		
WT	8.52	0.0635 9	19.26 921	0.58	12.90 507	0.013 94	0.9 919 1	21.66	0.706 8	7.208 25	0.166 75	5.453 69	0.31	6.0 487 6	0.181 4	5.3	0.119 99	0.9 981 6

G10V	4.76	0.1678	268.5 9338	10.72	18.42 334	0.046 33	0.8 873 9	150.0 1	3.75	14.39 823	0.026 57	3.590 44	0.18	4.7 675 8	0.032 86	2.6	0.060 383	0.9 875	
L9R	1.2	0.0874 9	76.65 111	5.57	4.094 82	0.181 23	0.9 551 8	6.7	4.58	0.765 04	0.578 85	39.83 135	10.1	103 .21 058	4256. 6956 1	0.023	0.965 97	0.9 581 3	
V2E	0.593	0.1031	13.94 009	4.2	4.360 87	0.627 77	0.9 600 4	0.593 4		2.180 44		13.94 009	4.20	2.1 804 4		0.593 4		0.9 599 1	
pH 4.23																			
WT	3.73	0.0598 1	155.5 4983	3.21	17.81 863	0.048 83	0.9 792 5	65.67	2.43	9.766 54	0.032 77	9.545 23	0.57	8.8 039 2	0.039 24	2.76	0.037 363	0.9 954 5	
G10V	43.44	1.68	29.19 5	1.62	21.84 98	0.014 13	0.7 488 2	128.4 7	5.24	1.963 14	0.038 77	9.311 98	0.52	20. 240 56	0.045 83	4.91	2187 8	0.9 375 4	
V2E	0.007 0	0.0498 2	23.60 99	3.8	558.7 4792	3965. 74	0.9 809 4	0.004 9425		395.3 4873	2.552 65E7	23.72 695	3.8	395 .34 873	2.552 65E7	0.004 9425		0.9 809 1	
L9R	0.015 87	0.1011	286.6 3353	16.94	203.1 4831	1282. 2182 7	0.9 622 5	0.010 7	0.995 34	149.6 3224		287.4 3105	17.02	149 .63 224		0.010 7	0.995 34	0.9 621 8	
pH 5.13																			
WT	9.24	0.2458	16	2.08	20.19 279	0.060 13	0.7 851 7	23.24	0.467 7	11.65 942	0.028 99	34.18 055	0.79	12. 032 14	0.049 56	1.83	0.025 6292	0.9 981 4	
G10V	5.38	0.1998	307.6 8428	13.14	25.95 484	0.038 63	0.8 337 4	187.0 1	3.58	22.21 606	0.027 17	2.9	0.11	4.1 644 6	0.023 7	3.14	0.060 5915	0.9 851 9	
L9R	0.009 74	0.0290 648	86.73 993	4.14	261.2 0171	774.6 4205	0.9 880 1	0.006 468		196.4 2949	1.332 15E7	87.12 422	4.16	196 .42 949	1.332 15E7	0.006 468		0.9 88	
V2E	5.803 61E- 4	11.06	49.83 202	5.91	3.556 33	0.549 4	0.9 501 4	5.803 6E-4		1.778 17	3593 56.93 469	49.83 21	5.92	1.7 781 7	3593 56.93 469	5.803 6E-4		0.9 499 8	
pH 6.3																			
WT	16.44	k_s (ms ⁻¹)	Error	C	M_s	Error	R ²	K_s (ms ⁻¹)	Error	M_s	Error	c		M_t	Error	K_t (ms ⁻¹)	Error	R ²	
WT	16.44	0.0945 7	- 0.028 49	0.22	18.27 461	0.011 48	0.9 941 8	16.44		9.137 3	2691 72.97 362	- 0.028 86	0.21	9.1 373	2691 72.97 362	16.44		0.9 941 7	
G10V	14.14	0.3134	28.05	0.27	20.82 121	0.034 17	0.8 821 6	4.57	0.063 4459	7.302 79	0.048 43	6.164 17	1.50	14. 406 36	0.058 05	66.46	1.45	0.9 933 4	
L9R	0.052 31	0.0227 7	0.675 4	1.73	18.42 039	0.637 49	0.9 937 8	0.052 31	52.02 616	9.210 26	2570 11.82 972	0.675 7	1.73	9.2 102 6	2570 11.82 972	0.052 31	52.02 616	0.9 937 7	
V2E	1.14	0.0191 421	28.05	1.33	9.003 44	0.090 49	0.9 956 4	0.091 4		5.119 01	1651 32.42 637	48.93 315	1.27	5.1 190 1	1651 32.42 637	0.091 4		0.9 966 3	
pH 7.45																			
WT	2.43	k_s (ms ⁻¹)	Error	C	Error	M_s	Error	R ²	K_t (ms ⁻¹)	Error	M_t	Error	c	Error	M_s	Error	K_s (ms ⁻¹)	Error	R ²
WT	2.43	0.0326 9	19.40 582	1.22	11.23 081	0.062 88	0.9 927 8	9.86	2.96	1.546 27	0.561 27	7.484 41	1.92	10. 793 04	0.170 42	1.8	0.222 97	0.9 933 8	
G10V	8.54	0.2447	70.13 613	3.48	13.46 809	0.034 34	0.8 835	35.83	1.02	6.188 16	0.396 68	8.002 7	0.53	10. 470 3	0.072 99	1.17	0.144 79	0.9 779 5	
L9R	0.399 8	0.1589 83	50	13.38	5.777 37	1.916 84	0.7 959 5	0.443 362	326.0 0829	2.722 59		25	11.65	2.7 225 9		0.443 362	326.0 0829	0.7 845 6	
V2E	0.02. 71	0.1166 74	48.22 091	6.98	62.96 174	267.7 7652	0.9 454	0.027 87		30.90 586		48.19 548	6.99	30. 905 86		0.027 87		0.9 452 3	
pH 8.4																			
WT	4.6	0.0269 3	21.66 181	0.53	8.317 5	0.012 74	0.9 973	4.6	108.6 5889	4.158 75		21.66 181	0.82	4.1 587 5		4.6	108.6 5889	0.9 973	
G10V	11.96	0.2450 53	16.84 473	1.28	6.286 82	0.014 57	0.9 383 3	33.65	0.852 892	4.477 21	0.052 14	- 1.438 64	0.28	2.4 870 8	0.030 38	2.81	108.6 5889	0.9 885 7	
L9R	0.025 181	0.0548 971	53.22 878	4.01	163.2 8879	352.3 6465	0.9 83	0.031 57	4.899 86	65.27 655	2.297 72E7	52.84 362	4.0	65. 276 55	2.297 72E7	0.031 57	4.899 86	0.9 829 4	
V2E	0.010 74	0.0545 1	116.5 3619	5.45	255.5 4756	1289. 519	0.9 831 5	0.007 528	4.144 76	182.1 7781	6.022 13E7	116.8 1284	5.47	182 .17 781	6.022 13E7	0.007 528	4.144 76	0.9 831 3	

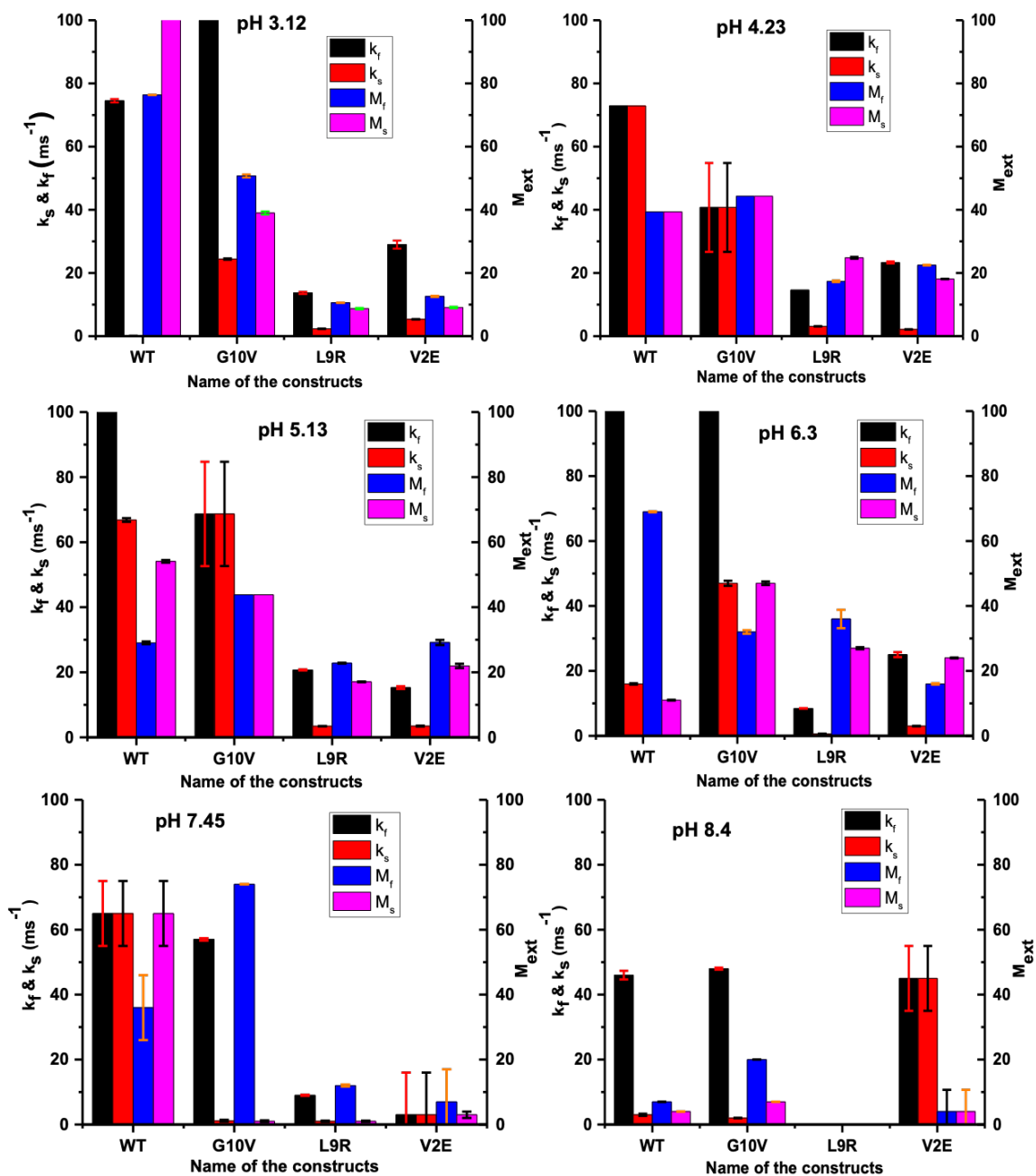


Figure Apx. 2.1: Comparison of k_s , k_f , M_s and M_f in the double exponential buildup with error bars of four gp41 constructs at pH's 3.12-8.4 for lipid:protein 100:1. All the plots are made vertical scale 0-100 though k_f of WT and M_s of G10V at pH 3.12, k_f of WT at pH 5.13, k_f of WT and G10V at pH 6.3, respectively have the values >100. All rates and fusion extent values of L9R at pH 8.4 were not visualized because fitting for the curve did not work well due to negative fusion (Fig. 4.10).

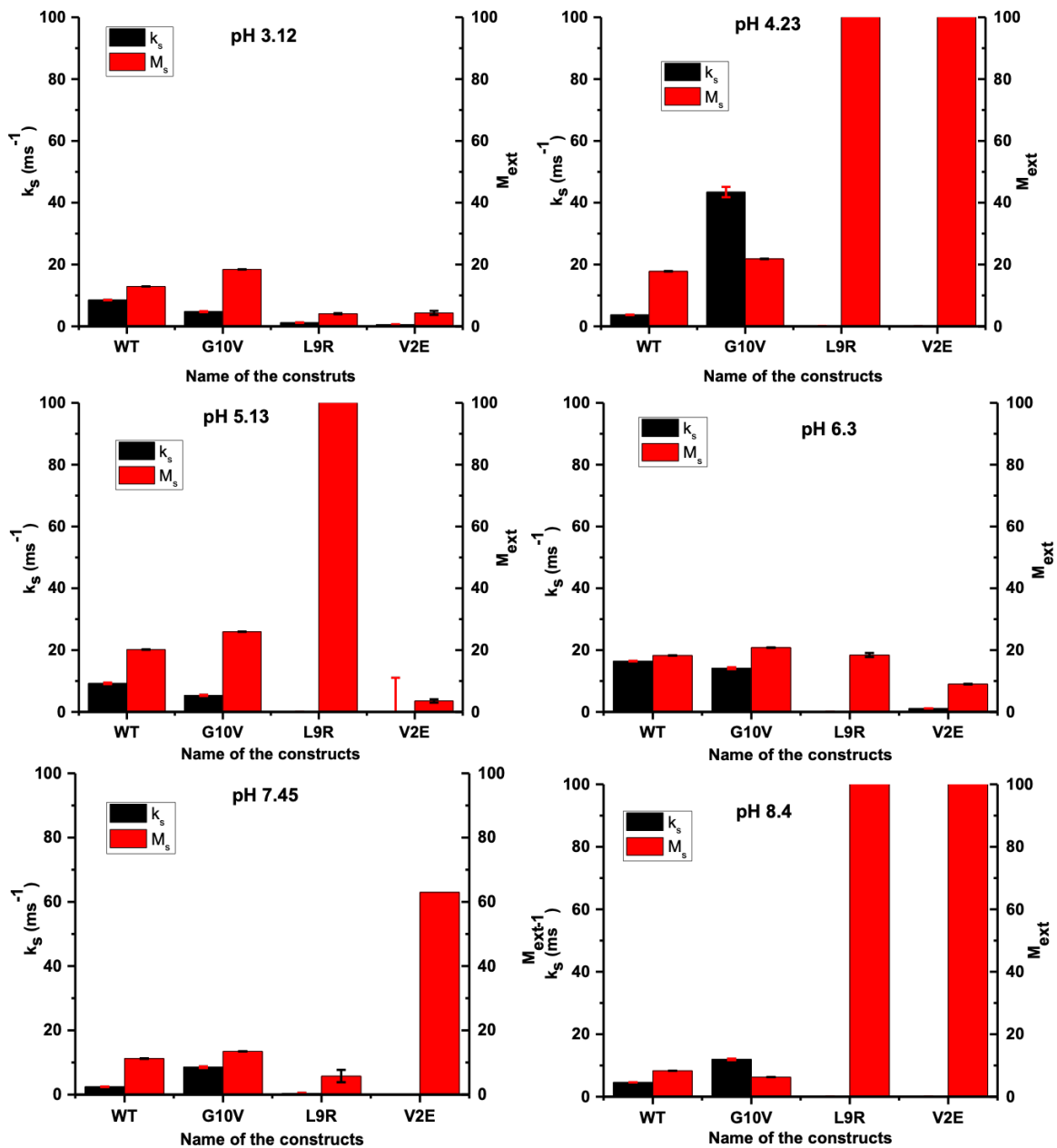


Figure Apx. 2.2: Comparison of k_s and M_s in the single exponential buildup with error bars of four gp41 constructs at pH's 3.12-8.4 for lipid:protein 600:1. All the plots are made vertical scale 0-100 though M_s of L9R and V2E at pH 4.23, M_s of L9R at pH 5.13 and 8.4, respectively and M_s of V2E at pH 8.4 have the values >100 . All rates of fusion values of L9R and V2E at pH's 4.23-8.4 are not visualized because fusion is negligible at those pH's.

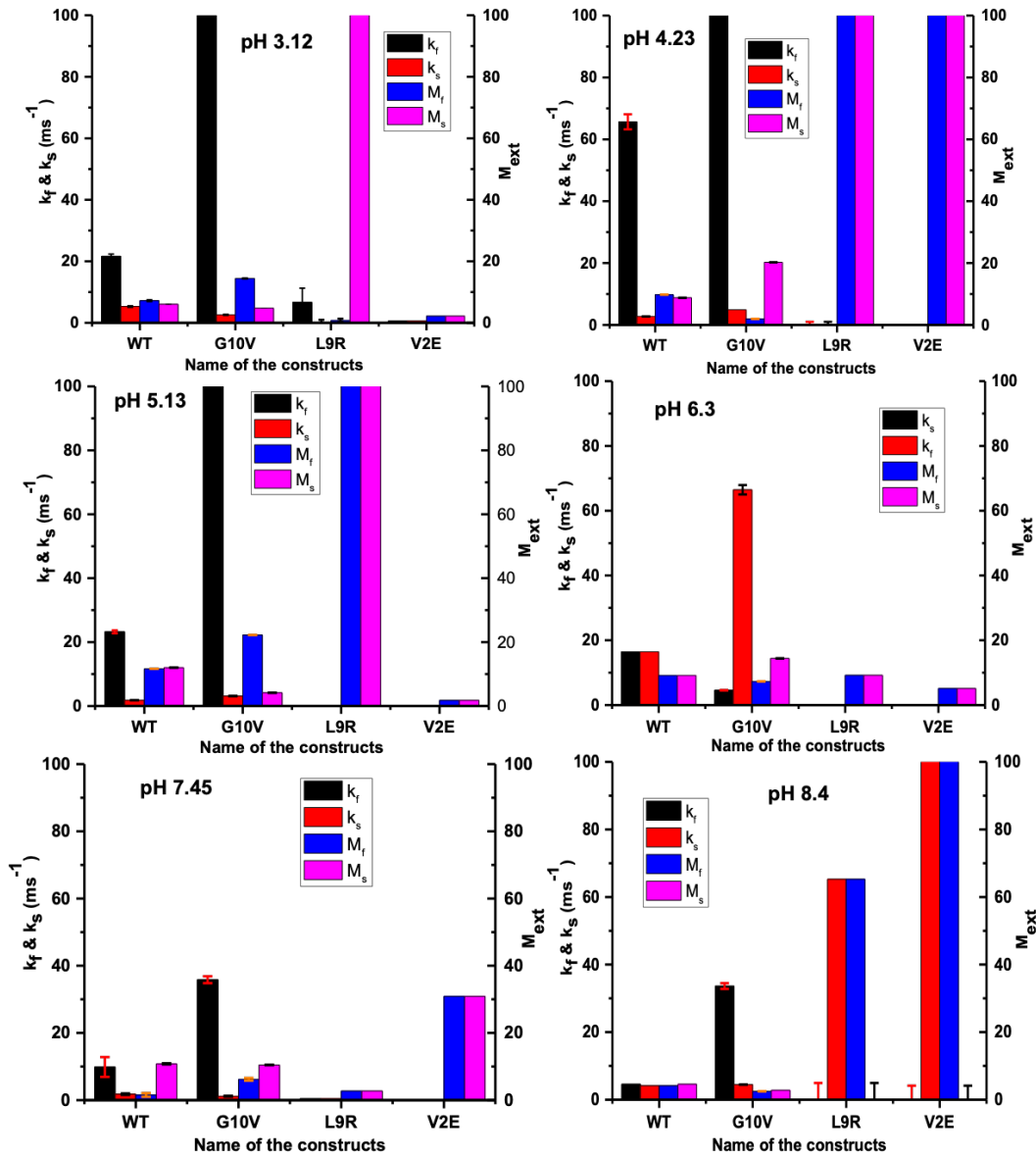


Figure Apx. 2.3: Comparison of k_s , k_f , M_s and M_f in the double exponential buildup with error bars of four gp41 constructs at pH's 3.12-8.4 for lipid:protein 600:1. All the plots are made vertical scale 0-100 though k_f of G10V and M_s of L9R at pH 3.12, k_f of G10V and M_s and M_f of L9R and V2E, respectively at pH 4.23, k_f of G10V and M_s and M_f of L9R at pH 5.13 and M_s and M_f of V2E at pH 8.4 have the values >100 . All rates of fusion values of L9R and V2E at pH's 3.12-8.4 are not visualized because fusion is negligible at those pH's.

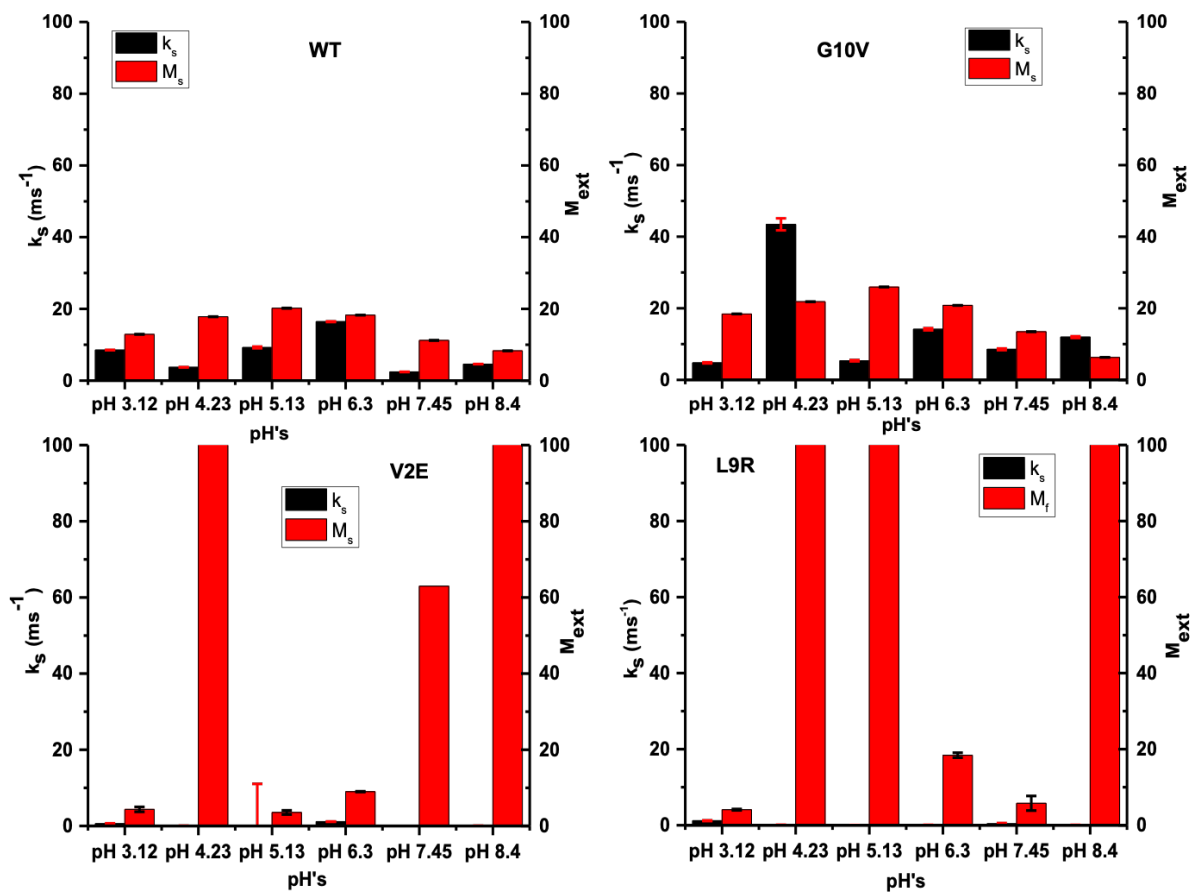


Figure Apx. 2.4: Comparison of k_s and M_s through single exponential buildup with error bars of four different gp41 constructs at different pH's (3.12, 4.23, 5.13, 6.3, 7.45 and 8.4) for lipid:protein 600:1. Some error in the bars of the plots are too small to observe. However, some errors of M_s in the plots are not determined after fitting with the single slow exponential buildup.

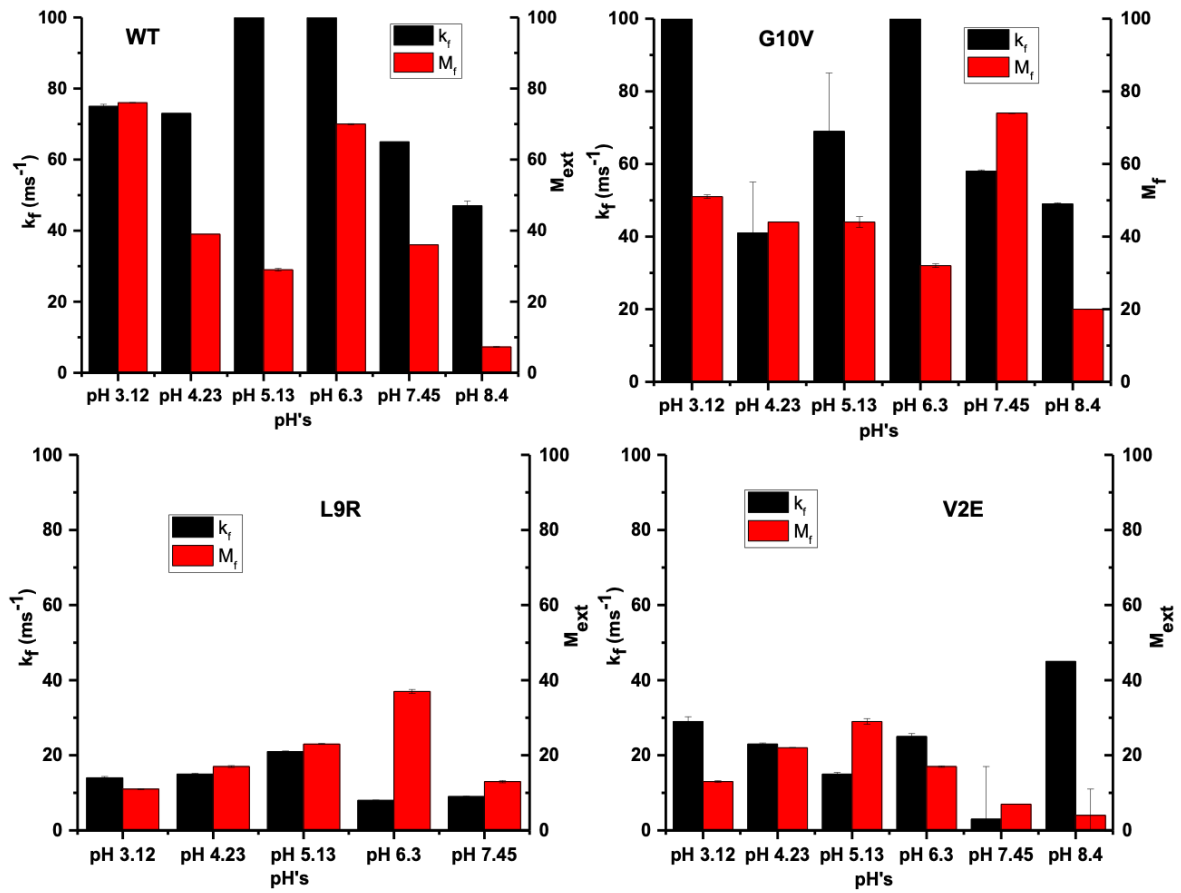


Figure Apx. 2.5: Comparison of k_f and M_f through double exponential buildup with error bars of four different gp41 constructs at different pH's (3.12, 4.23, 5.13, 6.3, 7.45 and 8.4) for lipid:protein 100:1. Some error in the bars of the plots are too small to observe. However, some errors of k_f and M_f in the plots are not determined after fitting with the single slow exponential buildup.

Table Apx. 2. 2: Time course of percent vesicle fusion of all constructs at pH 3.12 in lipid:protein 100:1

Time (s)	FPHM	G10V	L9R	V2E
1	19.47819	20.19806	0.37267	0.7029
2	25.08705	24.83709	0.78782	1.11817
3	29.48212	31.87155	0.71469	1.54524
4	32.16811	33.68846	1.03982	2.66508
5	35.40541	36.88965	1.217	3.83119
6	38.08552	39.12425	1.35222	3.47553
7	40.88183	42.28009	1.57604	3.79779
8	43.21604	44.61456	1.54863	3.74799
9	45.73024	46.48487	1.73737	4.0828
10	47.76424	48.91423	1.69034	5.15039
11	49.5605	50.49424	2.01392	6.48307
12	51.47297	50.86174	2.19733	5.32707
13	53.4702	53.03104	2.24461	4.90905
14	54.57324	53.29561	2.48921	4.95287
15	56.82457	54.13467	2.58014	5.23942
16	57.74001	55.80684	2.5691	5.54543
17	59.14154	56.58848	2.72198	5.95242
18	60.37975	57.4716	2.86552	5.85742
19	61.32622	58.44351	2.87656	5.97832
20	62.22528	58.87229	3.04906	6.43649
21	63.47857	60.03816	3.27833	6.20832
22	64.21432	60.36561	3.30002	6.86264
23	65.24755	61.05123	3.49864	6.96132
24	66.0284	62.06254	3.58307	6.93374
25	66.81384	62.5304	3.50604	7.16298
26	67.56222	63.47368	3.70569	7.3536
27	68.24324	64.22686	3.77389	7.32066
28	68.93948	65.83099	3.96886	7.36847
29	69.86139	65.53506	4.08369	7.54484

30	69.76313	66.08334	4.04004	7.70298
31	70.23199	66.54347	4.06356	7.96332
32	70.86933	67.15576	4.32478	8.29477
33	71.43156	67.37353	4.37933	8.1921
34	71.94336	68.43823	4.29685	8.31607
35	72.49222	69.3167	4.67758	8.4952
36	72.69734	69.46144	4.62159	8.80182
37	73.01839	70.26319	4.91841	8.81255
38	73.24391	70.43721	4.87658	9.06707
39	73.97721	70.91697	4.94672	9.16928
40	74.11856	72.34355	5.03934	9.31915
41	74.31147	71.96012	5.15261	9.42013
42	74.53972	72.19735	5.22782	9.59619
43	74.62346	72.83344	5.28043	9.24437
44	74.72358	73.40648	5.04285	10.2479
45	74.96189	73.11377	5.3646	10.12608
46	75.78382	74.57798	5.50567	11.85947
47	75.76601	74.80717	5.67895	10.12056
48	75.50026	75.28017	5.61348	10.12026
49	75.92416	74.96076	5.7361	10.11214
50	75.87589	76.22039	5.59725	10.44941
51	76.08217	75.78647	5.9846	10.33448
52	75.96452	76.01646	5.82521	10.71818
53	76.15873	76.64869	6.10163	10.73197
54	76.55116	77.26065	6.0224	10.65106
55	76.35796	78.22387	6.17736	10.95355
56	76.57558	77.39784	6.1506	10.91846
57	76.74522	78.12673	6.19074	11.01316
58	76.80398	78.21471	6.25933	11.18754
59	76.87221	78.42009	6.53341	11.2594
60	76.89131	78.9481	6.60979	11.4508
61	77.25746	79.88462	6.66032	11.18769
62	76.74436	79.29727	6.63239	11.53186

63	77.16811	79.31078	6.58641	11.35901
64	77.24022	79.67715	6.75527	11.6664
65	76.99114	80.45702	6.75475	11.54779
66	77.30084	80.30616	6.90959	11.81258
67	77.42236	80.7306	6.88699	11.7824
68	76.31243	80.88435	6.75722	11.76998
69	75.65655	81.82152	7.06884	12.00275
70	76.0464	81.13042	7.15224	12.35365
71	76.06665	81.35044	7.18666	14.03924
72	76.37563	82.23534	7.28694	12.60864
73	76.61925	81.50774	7.02338	12.41985
74	76.60819	81.70395	7.10755	12.89825
75	76.92377	82.10104	7.14483	12.7608
76	7.69E+01	82.36256	7.38423	12.6402
77	7.72E+01	82.55571	7.35423	12.96506
78	7.68E+01	82.37607	7.66884	13.42599
79	76.99603	82.94428	7.59298	12.78685
80	77.13479	82.7648	7.64571	13.92125
81	76.68892	83.09096	7.57154	13.11676
82	77.27513	83.21705	7.71066	12.70839
83	77.25487	84.96513	7.80951	13.00061
84	77.1187	84.61742	7.9133	12.7749
85	77.02073	83.7129	8.05554	12.85106
86	77.22586	84.58091	8.07372	13.17836
87	77.17731	84.44018	8.03203	13.11983
88	76.88011	84.75477	8.30767	13.07493
89	77.0124	85.04089	8.35638	13.31444
90	77.27599	84.16274	8.25233	13.33788
91	77.13737	84.53169	8.42367	13.32516
92	77.35988	84.26922	8.41418	13.45756
93	77.22571	85.08576	8.56006	13.51196
94	77.25128	84.60053	8.57902	13.60329
95	77.1526	84.56708	8.74165	13.77659

96	77.22097	84.89453	8.83946	13.71224
97	77.18923	85.10313	8.56019	13.73216
98	76.97563	85.16505	8.93104	14.00737
99	77.32612	85.06501	8.96287	13.86853
100	77.34839	85.589	8.9856	14.09118
101	77.1694	85.35049	9.13017	14.28258
102	77.19627	85.29436	9.02807	14.11432
103	77.02504	85.6654	9.26423	14.11157
104	78.56002	85.47529	9.16966	14.53603
105	78.7265	85.65478	8.96845	14.253
106	79.10141	85.86933	9.1733	14.27553
107	78.55758	86.26337	9.26605	14.47519
108	78.67494	85.73697	9.37854	14.22986
109	78.63816	85.99204	9.43517	14.47887
110	78.52914	86.07841	9.36269	14.46201
111	78.2101	86.46553	9.65353	14.66198
112	78.13426	86.70775	9.54688	14.62383
113	77.84597	86.60674	9.51895	14.54369
114	77.71065	87.56771	9.66119	14.43887
115	77.5265	86.86713	9.56481	14.31767
116	77.59789	87.40125	9.90449	14.32701
117	77.60048	86.46602	9.865	14.39382
118	77.35988	86.86279	9.75978	14.24166
119	77.56672	86.42661	9.91527	14.48377
120	77.51946	87.73337	9.8007	14.50277
121	77.36821	86.95736	9.82512	14.69386
122	77.20589	86.96861	9.9193	14.91574
123	77.15964	88.13014	10.05958	14.63685
124	77.2971	87.41975	10.08258	14.83254
125	77.16581	86.99789	9.90553	14.95681
126	77.13105	88.09942	10.05789	15.01519
127	77.18865	87.75701	9.97983	15.20275
128	77.18219	87.46993	10.17272	15.08721

129	76.84348	87.5386	10.23429	15.27063
130	77.21695	88.16472	10.14765	15.09687
131	77.11956	87.32067	10.24261	15.1105
132	77.05909	88.02994	10.45681	15.10912
133	76.99962	88.14349	10.32042	15.50539
134	76.9604	87.20069	10.28262	15.37591
135	76.63275	87.37664	10.26391	15.41636
136	77.23361	87.33869	10.48993	15.34127
137	77.01542	87.31649	10.48201	15.51749
138	76.92909	87.66518	10.36471	15.56561
139	76.99991	87.14778	10.57514	15.67303
140	7.71E+01	87.72372	10.71322	15.80067
141	7.69E+01	87.37343	10.65321	15.7003
142	7.67E+01	87.69043	10.4963	15.82259
143	7.72E+01	87.94165	10.63723	15.80619
144	7.69E+01	87.45175	10.67322	15.65832
145	7.70E+01	87.71664	10.66698	15.79776
146	7.69E+01	87.54262	10.73557	15.85676
147	7.68E+01	88.10312	10.883	16.04707
148	7.67E+01	87.86766	10.76609	15.88817
149	7.67E+01	88.15105	11.10668	16.00585
150	7.71E+01	87.96577	10.85949	16.25486
151	7.68E+01	87.96432	11.06459	16.09013
152	7.68E+01	87.79513	10.76687	16.15373
153	7.70E+01	87.99955	10.82299	16.22375
154	7.70E+01	88.18627	11.03771	16.31432
155	7.68E+01	87.72227	11.12811	16.25578
156	7.68E+01	88.25623	10.96133	16.16552
157	7.69E+01	88.2194	11.23891	16.44211
158	7.68E+01	88.00324	11.33296	16.52946
159	77.04487	88.22262	11.11915	16.51827
160	77.28073	87.5571	11.25346	16.38618
161	76.78157	88.60894	11.21462	16.41637

162	76.96198	88.17582	11.2888	16.37821
163	76.9186	88.34003	11.3049	16.53099
164	76.99258	87.93151	11.14435	16.46479
165	76.81935	88.62775	11.30412	16.45284
166	76.6148	88.23275	11.31283	16.64285
167	76.81719	87.85303	11.38063	16.65235
168	76.98454	88.19319	11.30841	16.65741
169	77.07604	87.85769	11.30412	16.67687
170	76.83155	88.22423	11.53066	16.58018
171	77.09342	88.26508	11.34543	16.74644
172	77.30759	88.71637	11.59886	16.76375
173	76.68877	88.40468	11.51183	16.86336
174	77.00953	88.18321	11.70394	16.99897
175	77.23864	88.35128	11.7346	16.78337
176	76.98195	88.20895	11.71486	16.92863
177	76.64396	88.62357	11.90996	16.9671
178	76.79995	87.8971	11.76292	17.05812
179	77.05708	88.61971	11.51572	16.94779
180	77.10046	88.76655	11.57535	16.87163
181	76.75973	88.94411	11.8771	16.89002
182	76.74436	88.64368	11.69875	17.08938
183	76.93699	88.41224	11.76253	16.94289
184	76.8926	88.71171	11.96751	16.97598
185	77.14657	88.77025	11.79747	17.37424
186	76.94633	88.89393	11.85618	17.25748
187	77.09026	88.62984	12.01492	17.30299
188	77.10175	88.80998	11.95205	17.3367
189	76.99416	88.46692	12.14936	17.32413
190	77.1299	88.6982	11.91944	17.18913
191	76.78315	88.82236	11.94594	17.3367
192	77.20072	88.37541	12.16534	17.26345
193	76.89634	88.32201	12.03986	17.14071
194	76.99631	88.69064	12.13884	17.5074

195	77.20546	88.82799	12.12156	17.35785
196	76.9265	88.6136	12.25289	17.63872
197	77.15964	88.69965	11.86852	17.50449
198	77.20345	88.49941	12.16118	17.58754
199	77.21738	88.58047	12.12247	17.59153
200	77.07848	88.79872	12.08688	17.60057
201	76.87221	88.05648	12.03791	17.68975
202	77.23749	88.33536	12.30329	17.54004
203	77.13996	88.34292	12.47709	17.71044
204	77.11137	88.7458	12.39551	17.74721
205	77.0881	88.28197	12.47046	17.6634
206	76.92507	88.55216	12.28341	17.97186
207	77.09054	88.70318	12.41136	17.80223
208	77.38444	89.05782	12.25354	17.65068
209	77.10922	88.80065	12.32043	18.13612
210	77.16725	89.28861	12.49878	17.9291
211	77.43931	88.54171	12.4211	17.77449
212	77.0881	88.67391	12.47709	17.90137
213	77.19325	88.54348	12.36863	18.03714
214	76.95121	88.72232	12.50515	17.97845
215	77.06296	88.76752	12.43357	17.99086
216	76.91817	88.83909	12.48826	18.04633
217	77.2306	88.80837	12.55568	18.25289
218	77.4939	88.63531	12.51632	18.14455
219	77.23548	89.10044	12.62803	18.19206
220	77.54748	89.2476	12.58347	18.17704
221	77.54403	89.00201	12.40084	18.13505
222	77.40297	88.37798	12.68921	18.06027
223	77.39895	89.58052	12.67843	18.00358
224	77.05205	90.02297	12.53307	18.14854
225	77.25257	90.05851	12.84522	18.28614
226	77.43586	89.32946	12.67258	18.36965
227	77.62418	89.46569	12.83469	18.39954

228	77.44951	88.58529	12.89341	18.41026
229	77.14484	89.05814	12.75637	18.24691
230	77.57721	88.90149	12.68233	18.29503
231	77.61915	88.88943	12.64492	18.27986
232	77.23132	89.22749	12.78235	18.41654
233	77.30141	89.00748	12.77676	18.21382
234	77.33215	89.08082	12.81508	18.38651
235	77.65291	88.95199	12.85418	18.26009
236	77.21695	89.12987	12.97693	18.37425
237	77.57419	88.97821	12.97576	18.30683
238	77.28461	88.76189	12.97005	18.39049
239	77.67977	88.54251	13.00967	18.51109
240	77.43644	88.87608	12.86756	18.19635
241	77.56256	89.05605	12.9907	18.4026
242	77.85775	88.88669	12.86483	18.42298
243	77.10591	89.39074	12.83807	18.6015
244	77.15461	88.88026	13.15879	18.42926
245	77.25085	88.79775	12.856	18.57315
246	77.36074	88.99236	13.19282	18.51661
247	76.97218	89.66737	13.34935	18.49056
248	77.58051	88.88058	13.04669	18.65666
249	77.66081	88.86707	13.25439	18.64716
250	77.94422	88.96325	13.10982	18.4478
251	77.65277	88.91805	12.96823	18.47018
252	77.61743	89.13743	12.95251	18.33472
253	77.29222	88.9417	13.12488	18.57821
254	77.6555	89.0004	13.18009	18.85188
255	77.79512	89.16783	13.21243	18.53438
256	77.52851	89.55913	13.04097	18.48964
257	77.38674	89.46327	12.94537	18.74692
258	77.86794	89.2973	13.04695	18.67628
259	77.66253	88.95762	12.95485	18.80775
260	77.696	89.09384	13.04565	18.55323

261	77.71511	88.85356	13.22763	18.75029
262	77.75949	89.12054	13.21023	18.52274
263	77.69414	89.10124	13.40377	18.69758
264	77.67403	89.23409	13.15437	18.79366
265	77.9412	88.78553	13.11566	18.78262
266	77.50481	89.24084	13.3761	18.94367
267	77.67963	88.92191	13.27388	18.80515
268	77.7131	88.9068	13.2892	18.93448
269	77.72085	89.39926	13.32531	18.8954
270	77.97999	89.19131	13.41403	18.68808
271	77.7266	89.22701	13.36026	18.81649
272	77.78018	88.84086	13.37247	18.71888
273	77.82399	89.35037	13.56069	18.8741
274	77.83792	89.42162	13.39091	18.89203
275	77.92497	89.63681	13.4443	19.22608
276	77.91966	89.42628	13.48314	18.8384
277	78.12435	89.03675	13.49431	18.92099
278	77.61298	89.1437	13.45365	18.94383
279	77.83534	89.37707	13.65837	18.95884
280	77.80503	88.85613	13.77878	18.8433
281	78.02164	89.76853	13.66538	19.2126
282	77.96261	89.44719	13.82503	19.24876
283	77.70591	89.43561	13.67214	19.11162
284	77.98875	89.45266	13.58069	18.79948
285	77.70936	89.2907	13.76787	19.33626
286	77.79598	89.16622	13.84386	19.23221
287	78.04448	89.29311	13.94765	19.1487
288	77.7503	89.17072	13.71734	19.17674
289	78.2509	89.16316	13.75436	19.05998
290	78.01087	89.49624	13.92453	19.1628
291	77.58037	89.09031	13.67642	19.33718
292	77.54274	89.29923	13.79177	19.00313
293	77.80603	89.27108	13.78645	19.20923

294	78.12162	89.9083	13.99662	18.97003
295	78.03342	89.50155	13.92998	19.22838
296	77.46617	89.55897	13.95687	19.46222
297	77.90644	89.33187	13.75138	19.43831
298	77.89811	89.0813	13.88985	19.37013
299	78.25478	89.23586	13.75761	19.31113
300	77.92957	89.65129	14.03507	18.93662
301	77.8971	89.47485	13.93778	19.15406
302	78.05899	89.17506	13.77943	18.97738
303	77.85301	89.73267	14.00363	19.20141
304	78.0024	89.23296	13.96389	19.19038
305	78.04376	89.43014	14.04806	19.1487
306	78.03874	89.29167	13.96882	19.06672
307	78.15049	89.50606	14.08599	19.26608
308	77.86651	89.75856	14.02221	18.98597
309	78.13254	89.23538	14.10599	19.49762
310	78.18698	89.4213	14.06027	19.27328
311	78.03486	89.56798	13.94245	19.31557
312	78.31597	89.50027	14.09378	19.5157
313	77.98085	89.45732	14.02715	19.23773
314	78.23826	89.33831	14.09781	19.41839
315	78.0949	89.78799	14.04014	19.26684
316	78.27087	89.62378	14.20601	19.64871
317	78.29011	89.69439	14.22888	19.15314
318	78.07221	89.66898	14.29902	19.30638
319	77.91779	89.32399	14.16146	19.51846
320	77.99909	89.8467	14.17224	19.27711
321	78.09404	90.13056	14.24485	19.55631
322	78.2723	89.85828	14.24732	18.80745
323	78.1752	89.25998	14.32045	18.46895
324	78.02294	89.35359	14.19796	18.56273
325	77.15001	89.1823	14.25602	18.58664
326	76.79148	89.32978	14.37306	18.68425

327	76.96155	89.94287	14.25239	18.88314
328	77.08494	89.19292	14.36696	18.86629
329	77.17458	89.60384	14.42281	19.04373
330	77.05406	89.7034	14.47321	18.99838
331	77.27426	89.58631	14.52764	18.96252
332	77.48212	89.65418	14.39774	19.13843
333	77.59718	89.72189	14.46087	19.51723
334	77.73191	89.32142	14.48503	18.96543
335	77.72272	89.53597	14.47386	19.4331
336	77.89639	89.74151	14.50413	19.43648
337	77.88044	89.60706	14.44866	19.3974
338	78.0406	89.11089	14.60181	19.54635
339	77.8441	89.44414	14.50478	19.41257
340	77.83893	89.49399	14.59752	19.30056
341	77.82787	89.7896	14.30772	19.45563
342	78.15897	89.61188	14.40943	19.38438
343	78.20235	89.60223	14.50633	19.62204
344	78.06071	89.52037	14.56089	19.5301
345	78.02308	89.56347	14.60739	19.6743
346	78.1265	90.28384	14.57778	19.68395
347	78.40532	89.22299	14.51088	19.59247
348	77.93589	89.59371	14.69365	19.92422
349	78.22935	89.90862	14.60207	19.69437
350	78.18612	89.79748	14.53166	19.73038
351	78.05339	89.5802	14.76236	19.59906
352	78.3977	89.7502	14.58869	19.61622
353	77.86349	90.50369	14.77834	19.7716
354	78.30678	93.50835	14.67091	20.06474
355	78.24874	94.08574	14.81224	19.63062
356	78.05928	93.53746	14.86745	19.77865
357	78.60958	93.05577	14.41047	19.72762
358	78.25995	92.06231	14.55076	20.15224
359	78.18425	92.2032	14.75223	19.83642

360	78.26598	91.87141	14.7595	19.68793
361	78.59909	91.03942	14.79743	19.84163
362	78.33479	90.8654	14.74327	19.85496
363	78.31654	90.38146	14.8729	19.77436
364	78.55183	90.11529	14.8303	20.03746
365	78.72665	90.3234	14.72768	20.05309
366	78.74575	90.82005	14.64312	19.91932
367	78.56146	89.6492	15.14634	19.87565
368	78.66071	89.50557	14.76106	19.73697
369	78.37415	89.8126	14.82991	20.07776
370	78.8101	89.66045	14.72131	19.81282
371	78.57266	89.67638	15.13854	19.97127
372	78.6011	89.6159	14.98331	19.93725
373	78.80436	89.4303	14.96019	19.78233
374	78.43419	89.49657	14.82497	19.87672
375	78.5978	89.33477	14.95409	20.44982
376	78.56936	89.65724	14.82874	20.01785
377	78.84415	89.54996	14.81445	19.84347
378	78.77678	89.77609	14.92694	20.06029
379	78.5435	89.61172	14.8655	20.05279
380	78.55384	89.54063	14.97942	20.01647
381	78.61547	89.12312	15.00501	20.20786
382	78.80996	89.76065	15.07944	20.18181
383	78.53646	89.24454	15.06593	19.96422
384	78.57769	89.48724	15.09736	20.26119
385	78.41925	89.59001	15.20024	20.09324
386	78.84285	89.65885	15.01813	20.03225
387	78.52282	89.41454	14.98669	20.14948
388	78.58545	89.99997	15.1679	20.22548
389	78.93392	89.58776	14.9598	20.35726
390	78.79947	89.46971	14.97279	19.98046
391	79.10012	89.20385	15.04216	20.1268
392	78.869	90.11287	15.13464	20.14749

393	78.6712	89.63826	15.24012	20.36906
394	78.59076	89.45266	15.06658	20.17691
395	78.65181	89.42114	15.13529	20.2215
396	78.82088	90.10708	15.22531	20.00023
397	79.05128	89.50429	14.90577	20.17629
398	78.82016	89.41181	15.23882	20.2569
399	79.11592	89.46231	15.18621	20.22364
400	79.00417	89.5572	15.25883	20.44292
401	78.96136	89.37208	15.2587	20.1317
402	78.91654	89.74007	15.33222	20.24418
403	79.04956	89.66689	15.25233	20.14182
404	79.00805	89.75261	15.28974	20.32554
405	79.00589	89.86728	15.18829	20.18319
406	79.17352	90.03037	15.18258	20.33995
407	78.75925	89.48933	15.34352	20.43725
408	78.64132	89.90122	15.15491	20.31206
409	78.49524	89.51088	15.20297	20.25077
410	79.03778	89.77722	15.38612	20.37703
411	78.81556	90.02779	15.26428	20.31313
412	78.79603	90.03246	15.32845	20.34378
413	78.99382	89.5371	15.31143	20.30256
414	79.11721	89.97182	15.3582	20.51923
415	79.1333	89.80102	15.33469	20.20725
416	78.86196	89.74843	15.16556	20.25735
417	78.91654	89.7629	15.04125	20.38914
418	78.89471	90.42923	15.32832	20.58375
419	78.83998	89.72559	15.32429	20.2523
420	78.96725	89.88224	15.24869	20.37535
421	78.89945	89.3671	15.31247	20.46545
422	78.99066	89.91939	15.50862	20.41212
423	79.078	89.89414	15.436	20.35573
424	79.0566	89.77207	15.36781	20.34976
425	79.24922	89.95735	15.40509	20.51602

426	79.20254	89.72382	15.28117	20.25107
427	79.09279	90.14295	15.56993	20.42591
428	79.15686	89.70356	15.38353	20.58574
429	79.10931	89.6188	15.48355	20.45702
430	78.87762	89.10494	15.46172	20.49747
431	79.24448	90.43598	15.60994	20.38377
432	79.19378	90.37921	15.55343	20.4204
433	79.36083	90.05176	15.46341	20.03716
434	79.2034	90.03101	15.54161	20.46392
435	79.21776	89.91312	15.53512	20.69714
436	78.95562	89.56878	15.46926	20.40109
437	79.09897	89.66431	15.41106	20.57654
438	79.02744	89.96571	15.46588	20.88761
439	79.15514	90.27644	15.37443	20.55785
440	78.9898	89.65482	15.32338	20.31696
441	79.45866	89.9834	15.39041	20.55402
442	78.99971	90.32549	15.56759	20.47495
443	79.37003	89.52053	15.62578	20.61393
444	79.12109	89.83866	15.60487	20.4938
445	79.19306	90.16434	15.47718	20.57884
446	79.27278	90.53506	15.53369	20.63109
447	79.4792	90.1653	15.68567	20.53869
448	79.31314	89.93322	15.58798	20.58957
449	79.16993	89.90878	15.5472	20.46407
450	79.36385	89.90186	15.65826	20.68534
451	78.9526	89.85458	15.52576	20.35113
452	79.10544	89.71803	15.75269	20.76073
453	79.22538	90.045	15.57162	20.52904
454	79.07096	89.62137	15.67346	20.54482
455	79.03965	90.42199	15.70307	20.62634
456	79.45277	90.19345	15.80088	20.73039
457	79.59842	89.74312	15.77426	20.69591
458	79.51611	89.99595	15.80998	20.53716

459	79.67139	89.63311	15.62033	20.67998
460	79.33641	89.90283	15.75893	20.45181
461	79.43223	89.88288	15.80647	20.62144
462	79.35494	90.20632	15.62293	20.52291
463	79.17309	89.47984	15.77594	20.72441
464	79.54915	90.15807	15.61487	20.82264
465	79.47015	89.79861	15.74529	20.74004
466	79.60014	89.95445	15.74256	20.69515
467	79.41355	89.70886	15.73516	20.06964
468	79.63017	89.90894	15.78153	20.07531
469	79.26186	90.17045	15.62358	20.08788
470	79.33239	89.80504	15.71463	20.12174
471	79.42073	90.09357	15.53551	20.27176
472	79.25957	90.22449	15.62643	20.19008
473	79.4621	89.99547	15.81881	20.4725
474	79.34676	90.05031	15.70645	20.40783
475	79.32636	90.26486	15.65176	20.29199
476	79.33756	89.76564	15.85336	20.55999
477	79.32291	90.05176	15.73516	20.62956
478	79.79981	89.83431	15.78335	20.37933
479	79.52272	90.52766	15.8318	20.32432
480	79.39258	89.88835	15.9869	20.53548
481	79.54412	90.02506	16.02158	20.41335
482	79.40723	90.19361	15.80764	20.72794
483	79.45535	90.25843	15.85336	20.51785
484	79.5322	89.84509	15.8166	20.53977
485	79.26703	90.15791	15.79803	20.70802
486	79.46957	90.16707	15.7762	20.52873
487	79.31185	90.04838	15.91662	20.83612
488	79.59742	90.16595	16.02184	20.56566
489	79.69409	90.86508	15.96624	20.72242
490	79.52229	90.33225	15.84882	20.55356
491	79.76677	90.49919	16.09757	20.49257

492	79.30898	89.98919	15.8496	20.68657
493	79.63448	90.20246	15.85648	20.80027
494	79.28442	89.94899	16.0308	20.76318
495	79.67714	90.08505	15.74191	21.01296
496	79.42576	90.41829	16.129	20.8044
497	79.59325	90.41926	15.95871	20.72089
498	79.4927	90.03551	16.0334	20.82095
499	79.43179	89.89479	16.17122	20.70434
500	79.76505	90.39642	15.84362	20.69637
501	79.57443	90.58861	15.9287	20.70296
502	79.43208	89.9974	16.00365	20.86248
503	79.63333	90.42247	16.08744	20.89083
504	79.47733	90.97075	16.11471	20.79168
505	79.52014	90.63397	15.95897	20.90339
506	79.63634	90.43695	16.10263	20.89527
507	79.88887	90.48986	16.10289	20.75338
508	79.44946	89.94127	16.15628	20.78295
509	80.10821	90.50739	15.99547	20.82769
510	79.69754	90.45834	16.12056	20.63891
511	79.47661	89.94046	15.93702	20.84501
512	79.66407	90.12654	16.24422	20.87535
513	79.58334	90.2803	15.88168	20.80808
514	79.59971	90.24845	16.10744	20.9394
515	79.8498	90.15131	15.94988	20.81084
516	79.79119	90.21806	16.10952	20.8752
517	79.70615	90.06752	15.97975	20.55708
518	79.98612	90.10499	15.89584	20.91366
519	79.72856	91.00195	16.12991	20.89389
520	79.82768	90.46542	16.10056	21.03073
521	79.88585	90.56127	16.08523	20.62389
522	79.53019	90.76376	16.18135	20.9204
523	79.96356	90.68479	16.29839	20.85819
524	79.89548	90.28384	16.26267	20.78387

525	79.99488	90.00351	16.29163	20.79077
526	79.70572	89.8824	16.10328	20.89405
527	79.95451	90.45416	16.28722	20.87397
528	79.43352	90.28657	16.3293	20.72258
529	79.4374	90.74735	16.11887	21.07915
530	79.85942	90.19747	16.13394	20.8398
531	79.76806	90.4577	16.38399	20.99288
532	80.044	90.43116	16.33814	20.95074
533	79.57716	90.08843	15.96754	20.80195
534	79.599	90.27933	16.43634	20.80977
535	79.79378	90.01589	16.45491	20.79674
536	79.95193	90.00126	16.23175	20.78035
537	79.8531	90.63397	16.25046	21.00346
538	79.74408	90.65954	16.36918	21.01357
539	79.97362	90.12494	16.15576	20.97878
540	79.88485	89.8861	16.37685	20.82172
541	79.48063	89.92743	16.41698	20.88577
542	80.16725	90.41974	16.23487	21.01709
543	80.21106	89.86535	16.31995	20.71476
544	79.90539	90.67739	16.26656	20.98874
545	79.95609	90.61805	16.34931	20.82478
546	79.94791	90.27145	16.38529	21.13416
547	79.73373	90.53329	16.3962	20.8516
548	79.76964	90.75379	16.308	21.00821
549	79.59181	90.81555	16.55299	21.00453
550	79.70658	90.00142	16.36009	20.84149
551	80.11109	90.41797	16.38139	21.10061
552	80.19239	90.37471	16.29423	21.003
553	79.98224	90.1095	16.57195	21.08436
554	80.02361	90.39851	16.43283	21.0836
555	79.74896	90.69444	16.3762	21.08283
556	79.80714	90.46365	16.38906	20.93312
557	79.84836	90.61499	16.12602	21.06766

558	79.89964	90.4778	16.56987	21.01893
559	80.04357	90.35782	16.41283	20.98951
560	80.29165	90.19184	16.46154	21.03993
561	79.87924	90.23205	16.78693	21.0056
562	79.96457	90.1756	16.44634	20.95396
563	79.95624	90.3895	16.60053	20.89742
564	79.8916	90.51962	16.53896	20.89573
565	79.74666	90.24283	16.49115	21.09233
566	80.08724	90.65134	16.47817	20.85512
567	80.19397	89.97633	16.42218	21.157
568	80.03007	90.55516	16.55987	20.86968
569	80.14901	90.79818	16.4453	21.07624
570	79.94173	90.40671	16.46531	21.10704
571	79.96845	90.55162	16.48349	21.40677
572	80.00709	90.04227	16.45816	20.9961
573	80.19052	90.24829	16.61638	20.97143
574	80.32583	90.63397	16.3271	20.94691
575	80.21235	90.34399	16.53844	21.14382
576	79.79406	90.24379	16.30878	21.07302
577	80.11539	90.05578	16.67106	21.29123
578	80.21537	90.52283	16.5135	21.26227
579	79.91372	90.56851	16.50713	21.05203
580	79.92349	90.50321	16.55506	21.14029
581	80.06512	90.60212	16.58793	21.00821
582	80.20661	90.16354	16.51311	21.23637
583	80.06641	90.74735	16.60858	21.27591
584	79.96486	90.2269	16.62651	21.29966
585	79.72267	90.52155	16.8372	21.11041
586	80.44333	91.2982	16.83304	21.21737
587	80.00623	90.4704	16.70509	21.51756
588	80.16768	90.53956	16.79719	21.33414
589	80.01556	90.55999	16.53909	21.35252
590	80.28863	90.19747	16.6217	21.05862

591	79.99473	90.85704	16.63846	21.34042
592	80.00522	89.20691	16.6282	21.28495
593	79.97951	89.04399	16.62833	21.10122
594	80.38659	88.47319	16.67899	21.17309
595	80.2023	88.6826	16.76082	21.18626
596	80.19799	89.12987	16.75952	21.28985
597	80.13579	89.00104	16.73042	21.32816
598	80.15763	88.72699	16.76628	20.98859
599	79.92191	88.98528	16.7929	21.22304
600	80.15806	88.55731	16.74056	21.28587
601	80.42595	87.73803	16.82785	21.40891
602	80.16639	87.16419	16.74653	21.37582
603	80.13665	87.89613	16.6595	21.46055
604	80.20589	87.79191	16.72458	21.11011
605	80.16294	88.5163	16.6934	21.17355
606	80.31721	88.0753	16.68002	21.33781
607	80.32497	88.24594	16.79122	21.25721
608	79.77841	89.09642	16.56117	21.43772
609	79.96213	88.41867	16.55818	21.3346
610	79.57745	89.05508	16.78004	21.252
611	79.90481	88.36335	16.77069	21.16405
612	79.82107	88.46596	16.78082	21.16895
613	80.29998	88.40806	16.70977	21.39068
614	79.67312	89.07712	16.87331	21.16251
615	79.9956	88.62904	16.72354	21.25507
616	80.06225	89.31483	16.65119	21.20557
617	80.01298	89.26111	16.93852	21.25078
618	80.25818	88.99188	16.84175	21.45412
619	80.44089	88.85823	16.81888	21.02797
620	80.21178	89.0345	16.66197	21.5102
621	80.3096	88.89843	16.7803	21.25353
622	80.16021	89.42773	16.86526	21.522
623	80.19928	89.24036	16.8007	21.42454

624	80.36533	89.16107	16.81823	21.42301
625	80.31348	89.09642	16.78394	21.36233
626	80.12717	89.0813	16.79174	21.34839
627	80.37108	89.46842	16.73315	21.19546
628	80.33847	89.28684	16.88812	21.20036
629	80.41001	89.50992	17.00619	21.38654
630	80.34235	89.44414	16.6821	21.39712
631	80.29811	89.23554	16.79329	21.43297
632	80.40354	90.35927	16.87812	21.5859
633	80.31003	89.50252	16.99801	21.28479
634	80.18549	89.74039	16.75251	21.25246
635	80.44247	89.60272	16.59949	21.37582
636	80.27355	89.53597	16.83941	21.2566
637	80.48341	89.69391	17.02607	21.23944
638	80.46373	89.36533	16.91319	21.26533
639	80.5943	89.58631	16.95463	21.23086
640	80.41532	89.56701	17.03243	21.25997
641	80.42854	89.15978	16.96749	21.44017
642	80.38243	89.49801	16.94294	21.58636
643	80.41173	89.52712	16.98048	21.35911
644	80.3165	89.93998	16.96502	21.25078
645	80.17946	89.35841	16.89383	21.29077
646	80.47637	89.63569	16.93787	21.69025
647	80.50237	89.3375	16.87526	21.46347
648	80.19828	89.61108	17.06725	21.33965
649	80.62576	89.72752	16.95515	21.40999
650	80.0114	90.05948	17.09725	21.39926
651	80.23261	89.58615	16.98294	21.25491
652	80.32641	89.5802	16.99671	21.41979
653	80.20675	89.64839	17.00697	21.46285
654	80.27857	89.91569	17.00632	21.34471
655	80.21781	90.11995	17.07595	21.33812
656	80.42811	89.3679	17.14194	21.46408

657	80.39521	89.65836	17.17311	21.60827
658	80.41015	89.79266		21.5194
659	80.27829	90.36795		21.51036
660	80.41432	89.57811		21.37888
661	79.93929	90.00785		21.39895
662	80.43443	89.79764		21.45412
663	80.40872	89.43465		21.47097
664	80.4781	89.68024		21.40079
665	80.36893	89.66882		21.37382
666	80.74585	89.50589		21.43834
667	79.9841	89.59564		21.28158
668	78.23984	89.81147		21.44998
669	77.69471	90.15389		21.78219
670	78.31525	89.96877		21.59418
671	78.41652	89.82305		21.48032
672	78.72909	89.23859		21.68045
673	78.84099	89.59676		21.4817
674	79.0237	89.37594		21.50469
675	79.5944	90.34978		21.3254
676	79.26416	89.82161		21.05234
677	79.57975	89.66029		20.7736
678	79.64353	90.09148		21.0364
679	79.5457	89.54658		21.09003
680	79.42993	89.69938		21.22396
681	79.82021	89.88079		21.40738
682	79.86014	89.6262		21.24112
683	79.82236	89.51731		21.44983
684	80.20833	90.06881		21.24725
685	80.14513	89.84879		21.2589
686	80.25473	89.75454		21.57977
687	80.14685	89.86632		21.10076
688	79.77726	89.66946		
689	80.14585	89.79668		

690	80.53182	90.07186		
691	79.88413	89.76146		
692	80.19928	90.51431		
693	80.5107	89.60625		
694	80.44779	90.35042		
695	80.37611	89.93081		
696	80.34623	90.41926		
697	80.37625	89.95092		
698	80.3063	89.63794		
699	80.20115	89.71803		
700	80.62289	89.73588		
701	80.32928	89.2907		
702	80.22069	89.84911		
703	80.18578	89.70806		
704	80.56342	89.91039		
705	80.34666	90.22449		

Table Apx. 2. 3: Time course of percent vesicle fusion of all constructs at pH 4.23 in lipid:protein 100:1.

Time (s)	FPHM	G10V	L9R	V2E
1	17.70987	23.8215	0.76954	7.56916
2	24.10795	28.28272	1.25517	7.93274
3	28.83189	32.82677	1.82078	8.54311
4	33.62036	35.04831	2.22394	12.33193
5	36.35606	49.13543	2.79636	9.86878
6	39.83047	46.1024	3.20083	9.57894
7	42.09999	46.86624	3.62156	9.95159
8	45.37525	48.28834	4.06392	11.12466
9	46.76935	49.99064	4.34252	11.37519
10	48.65162	50.31022	4.70111	10.70107
11	50.58147	52.32845	5.15986	11.259

12	52.39563	54.95824	5.49065	12.49313
13	54.04654	55.47572	5.906	12.55908
14	55.39453	55.5832	6.37537	12.03127
15	56.93972	56.84449	6.66079	12.46905
16	58.16699	57.34627	6.8117	14.01756
17	60.04852	57.65381	7.49019	12.77855
18	60.96685	58.4611	7.86254	14.32543
19	62.31644	60.07284	7.85795	13.49372
20	63.48495	60.40732	8.42119	15.01478
21	64.64878	63.03047	8.68236	14.91394
22	65.60166	62.43651	8.83261	14.85963
23	66.83446	62.3159	9.20562	15.81439
24	67.36702	63.02397	9.56656	15.86533
25	68.48561	66.52183	9.82563	16.25089
26	69.35735	69.58125	9.95373	16.65913
27	70.61954	68.88807	10.5563	16.34917
28	70.92761	66.84683	10.62985	15.90336
29	71.53443	66.94605	11.04022	16.12167
30	72.31323	67.5396	11.32775	16.37918
31	72.50378	68.29383	11.52651	16.48536
32	72.6143	69.29266	11.69708	16.72484
33	73.42715	72.5696	11.98814	16.96757
34	73.68273	73.48126	12.37504	17.15436
35	73.84747	71.59907	12.52307	17.46769
36	75.38466	72.76236	12.75867	17.54852
37	74.64667	73.38326	13.05786	17.71438
38	74.76875	73.43686	13.14557	17.99782
39	76.39077	74.0652	13.58767	18.25869
40	75.59291	74.85977	13.96382	18.268
41	76.54075	75.63133	14.06019	18.20322
42	76.80383	76.03078	14.40369	18.86582
43	78.18686	76.71638	14.59079	18.7701
44	76.35511	76.83076	14.94255	18.96596

45	76.65877	77.70573	14.9984	19.28906
46	76.37847	78.01489	15.27163	19.43409
47	76.47805	78.96188	15.34558	19.75091
48	76.48543	79.16546	15.64818	19.57668
49	76.63418	81.13265	15.81849	20.0311
50	76.85423	80.11339	16.1047	20.05168
51	76.76941	80.3546	16.34345	20.27662
52	76.67844	80.76082	16.4857	20.44957
53	77.49596	81.38578	16.62101	20.6103
54	78.39216	81.54781	17.34853	21.89119
55	77.38532	81.8479	17.00961	20.47516
56	77.10502	82.3842	17.40098	20.83233
57	77.34229	82.69526	17.37449	21.40724
58	77.39269	82.92645	17.60105	22.02413
59	77.25992	83.38993	17.85933	22.49448
60	77.70495	83.61747	18.00998	21.28814
61	77.35212	83.88156	17.93642	21.77721
62	77.2968	84.10084	18.35676	22.38166
63	77.47383	84.29779	18.55709	21.70882
64	77.5857	84.72973	18.84068	21.84071
65	77.01036	85.09628	18.92879	22.03134
66	77.33245	85.21973	19.0363	22.03239
67	77.54636	85.1063	19.27701	22.17894
68	77.50825	86.62491	19.36197	22.26942
69	77.3091	85.71827	19.5075	22.54146
70	77.22181	85.94797	20.03364	22.43772
71	77.68774	85.83468	20.00257	22.68464
72	77.46154	86.21152	20.01332	22.71348
73	77.42466	86.41037	20.02814	22.71813
74	7.75E+01	86.61165	20.48636	22.77326
75	7.75E+01	89.62951	21.2974	22.94075
76	7.75E+01	87.88553	20.78686	23.21267
77	77.53284	88.56409	20.87405	23.12265

78	77.3595	87.21075	20.97854	23.28455
79	77.69143	87.5302	21.73531	23.40935
80	77.35335	87.89974	22.79139	23.63079
81	77.40867	88.042	21.18793	23.31932
82	77.63611	87.76587	22.2052	23.61137
83	78.51756	88.48111	22.10831	23.86887
84	79.29574	88.06095	23.26889	25.40064
85	79.78626	90.42354	22.09756	24.79712
86	79.8551	90.21238	22.20271	24.0438
87	79.56251	90.56025	22.7826	23.98786
88	79.58341	88.36795	22.33998	24.97437
89	79.32525	89.88873	22.649	24.35318
90	79.43835	88.86053	22.40199	24.31282
91	79.36704	88.47637	22.91555	24.43552
92	79.31541	87.9953	22.79388	24.38097
93	79.23427	88.56747	23.06475	24.89191
94	79.06831	88.33249	22.99015	24.95786
95	78.97365	88.77796	23.20202	25.03334
96	79.09781	88.44808	23.50134	24.74606
97	78.97488	88.77606	24.2092	24.9325
98	79.15437	88.5515	24.44585	24.82678
99	78.76343	88.42913	23.8733	25.15593
100	79.23796	91.06785	24.85176	25.06916
101	78.72901	89.08482	23.89047	24.85341
102	78.77081	88.74723	24.06092	24.89912
103	78.62451	89.11704	24.15007	25.04416
104	78.74253	89.17226	24.24814	25.14802
105	78.88514	88.97058	24.90526	25.20326
106	78.62328	89.10892	24.50839	25.12918
107	78.47822	89.11988	24.72472	25.32876
108	78.54952	89.93624	24.60318	25.29829
109	79.07815	89.59229	24.76091	25.41599
110	78.76712	89.22803	25.06062	25.61348

111	78.86178	89.43392	25.17193	25.52253
112	78.5778	89.1215	25.19042	25.59871
113	78.85563	88.99535	25.39652	25.72013
114	78.56919	90.93385	25.41514	25.63081
115	78.64787	92.82619	25.56015	26.34482
116	78.65893	94.68063	26.91699	26.17164
117	78.61222	90.96769	25.74934	25.72571
118	78.69704	91.62825	25.85816	26.06405
119	78.66385	89.89225	25.91021	25.93972
120	78.77572	91.07462	25.96186	25.87284
121	78.33807	92.48914	26.09612	25.95623
122	78.54337	90.43572	26.21582	25.864
123	78.61714	90.34503	26.24847	26.18757
124	78.76466	91.612	26.40868	26.57917
125	78.81383	91.67427	26.4669	26.49194
126	78.52985	91.56192	26.47227	26.5216
127	78.71425	90.34638	26.62554	26.27178
128	78.46469	90.16771	26.73056	26.41937
129	78.60361	90.34367	26.75127	26.4909
130	78.57903	89.9579	26.97901	26.38366
131	78.65893	89.98091	27.02227	26.29666
132	78.53354	90.38293	27.20438	26.60592
133	78.63066	90.53453	27.04509	26.87401
134	78.75851	90.97987	27.30848	26.56324
135	78.59009	89.87086	27.2449	26.81377
136	78.66877	89.87573	27.25473	26.4524
137	78.67369	89.85692	27.28502	26.76166
138	7.85E+01	89.82646	27.40642	26.9802
139	7.86E+01	89.52231	27.62682	26.78585
140	7.87E+01	89.71763	27.60794	26.78888
141	7.84E+01	89.6375	27.82728	26.8511
142	7.85E+01	89.79289	28.02631	26.92147
143	7.87E+01	89.70883	28.0836	27.02451

144	7.84E+01	89.72142	28.18364	27.19979
145	7.87E+01	89.85881	28.08308	27.31063
146	7.88E+01	89.84947	28.34398	27.56301
147	7.85E+01	89.54478	28.42619	27.35331
148	7.86E+01	89.66592	28.50551	27.32435
149	7.86E+01	89.95113	28.53199	27.68828
150	7.87E+01	89.83404	28.56897	27.54138
151	7.87E+01	89.80169	28.61997	27.63908
152	7.86E+01	89.71249	28.65681	27.96927
153	7.89E+01	89.72129	28.90002	27.94345
154	7.87E+01	89.40387	28.76825	27.85494
155	7.89E+01	89.89144	28.77468	28.02452
156	7.84E+01	89.70193	28.90054	28.4502
157	78.67123	89.73428	29.01356	27.54324
158	78.9589	89.42214	29.22123	27.79191
159	78.74868	89.69597	29.18177	27.98765
160	78.62451	89.97008	29.0285	27.8803
161	78.45363	89.57943	29.23277	27.87216
162	78.6282	89.76744	29.24877	28.32168
163	78.47576	89.88182	29.70489	27.91147
164	78.73884	89.71113	29.47886	28.00393
165	78.52616	89.91458	29.61299	27.93462
166	78.59992	89.71398	29.73269	28.26446
167	78.59869	89.97955	29.7264	28.15223
168	78.76958	89.57645	29.91073	28.22422
169	78.63558	89.81103	29.86183	28.38077
170	79.08921	89.70261	30.04525	28.41647
171	78.6577	89.68731	30.21268	28.31587
172	78.55198	89.63425	30.29829	28.6078
173	78.60238	89.50593	30.13559	28.40159
174	78.75482	89.94301	30.08721	28.57465
175	78.77572	89.32224	30.27155	28.41252
176	78.77449	89.76014	30.31285	28.49801

177	78.59992	89.48779	30.38378	28.50743
178	78.70442	89.76054	30.34077	28.69084
179	78.45117	89.89969	30.52236	28.65863
180	78.79047	89.61002	30.56012	28.47032
181	78.81137	89.9227	30.67707	28.61315
182	78.77695	89.59391	30.73318	28.77342
183	78.68352	89.62342	30.68008	28.65444
184	78.6282	89.72426	31.03644	28.68759
185	78.87284	89.72332	30.8875	28.846
186	78.50649	89.78274	30.68061	28.86135
187	78.59747	89.6976	31.19442	28.81192
188	78.72778	89.75743	31.05086	28.8353
189	78.71548	89.72711	30.8833	28.87112
190	78.85317	89.50958	31.12021	29.06803
191	78.91218	89.59784	31.4392	28.87798
192	78.47207	89.56995	31.15011	29.04151
193	78.9171	89.40563	31.15509	28.861
194	78.54091	89.53408	31.43776	28.96428
195	78.5655	89.50593	31.32632	28.92741
196	78.74622	89.57239	31.38532	29.16828
197	78.66754	89.32955	31.52823	29.13653
198	78.7118	89.19487	31.46438	29.0186
199	78.60484	89.78897	31.53032	29.02453
200	78.74376	89.39101	31.32343	29.10199
201	78.76343	89.55872	31.6832	29.08896
202	78.60484	89.82321	31.58985	29.07524
203	78.90726	89.38058	31.72699	29.31053
204	78.58517	89.46708	31.78454	29.38508
205	78.73392	89.59513	31.97124	29.11548
206	78.63558	89.61381	31.86268	29.20736
207	78.6909	89.61002	32.3095	29.23458
208	78.86547	89.41131	31.89703	29.32134
209	78.82367	89.80494	31.9976	29.21004

210	78.95521	89.77678	32.1409	29.32634
211	79.02897	89.39913	32.2509	29.38182
212	78.51633	89.42796	32.21825	29.51592
213	79.07077	89.34999	31.93689	29.39066
214	78.86301	89.40346	32.15663	29.66154
215	79.15314	89.45896	32.43353	29.42951
216	78.56796	89.48305	32.35093	29.46359
217	78.48928	89.49144	32.48008	29.67143
218	78.9171	89.49726	32.38712	29.66933
219	78.64172	89.25199	32.55337	29.51046
220	78.87653	89.47574	32.45543	29.52639
221	78.82244	89.35053	32.63321	29.63677
222	78.88514	89.44163	32.5573	29.64805
223	78.75605	89.19392	32.76865	29.74575
224	78.7413	89.57618	32.6454	29.76819
225	78.63066	89.30762	32.91287	29.84275
226	78.94169	89.63994	32.75645	29.81739
227	78.61591	89.27717	32.78045	29.81018
228	78.75728	89.24807	32.91942	29.80995
229	78.85686	89.2061	33.03572	30.06385
230	78.6282	89.50322	32.92086	29.76773
231	78.60238	89.4174	32.98852	30.11758
232	78.73638	89.24807	33.06941	30.09281
233	78.88391	89.20543	33.34041	29.82856
234	78.86915	89.54572	33.22032	29.97789
235	78.96504	89.32251	33.27709	29.96115
236	78.68598	89.38613	33.36165	29.93602
237	78.79293	89.03068	33.2059	30.04093
238	78.89497	89.42755	33.39981	30.10769
239	78.90726	89.6	33.48385	30.0721
240	78.89374	89.11528	33.51689	30.30286
241	78.5151	89.38018	33.51964	30.11374
242	79.08921	89.34404	33.51269	30.14363

243	78.91095	89.42634	33.34749	30.08513
244	79.17281	89.24874	33.59503	30.2183
245	78.81137	89.1682	33.61273	30.02884
246	78.71303	89.27311	33.49945	30.09246
247	78.61591	89.27067	33.50168	30.58944
248	78.81506	89.10513	33.69362	30.35624
249	78.84088	89.29991	33.69205	30.53512
250	78.81014	89.23331	33.62059	30.28983
251	78.92939	89.13233	33.8069	30.16003
252	79.17772	89.23304	33.61522	30.39997
253	78.76589	89.28109	34.05784	30.42079
254	78.79293	89.11582	33.98862	30.50732
255	78.93185	89.33037	33.78094	30.40079
256	79.07937	89.27148	34.05837	30.38706
257	78.86424	89.28326	33.80231	30.58455
258	78.90112	89.07548	33.93617	30.78972
259	78.80892	89.16482	33.83692	30.50011
260	79.00561	89.2061	34.06243	30.52919
261	78.91464	89.42593	34.10845	30.55047
262	78.99209	89.1835	34.06309	30.58537
263	78.9798	89.46315	34.03739	30.67829
264	79.12855	89.44177	34.23025	30.53117
265	78.85563	89.1969	34.284	30.75064
266	78.94046	89.32346	34.05155	30.61188
267	78.70319	89.1636	34.20731	30.78995
268	78.88759	89.36921	34.30721	30.61037
269	78.97611	89.07386	34.48172	30.72773
270	79.20108	89.21382	34.26106	30.65178
271	78.94414	89.13937	34.57625	30.96348
272	78.8962	88.9186	34.65898	30.898
273	78.99455	89.19027	34.32268	30.79914
274	78.95152	89.08482	34.5179	30.84043
275	78.81506	89.16319	34.46756	30.90312

276	79.05233	89.11609	34.55776	30.64189
277	78.84334	88.99075	34.69687	30.8438
278	78.71671	89.27554	34.45366	30.92045
279	78.83596	89.22573	35.07315	30.98709
280	78.87776	88.9385	34.80451	30.89009
281	78.97242	88.85363	34.69385	30.93103
282	78.79416	88.88774	34.75351	31.06397
283	78.98594	89.19406	34.65124	31.16108
284	78.83842	88.83048	34.99724	31.13759
285	78.99824	89.35324	35.00235	31.18249
286	78.98594	89.01714	34.88881	31.10537
287	78.98348	89.08035	34.84712	31.04292
288	79.11626	89.06777	34.9638	31.03175
289	78.86915	89.128	34.80451	31.24238
290	78.89251	88.89545	34.73672	31.23215
291	78.86792	89.10445	34.81067	31.28018
292	78.70565	89.05233	35.06135	31.22261
293	78.78064	88.90953	34.96656	31.27774
294	78.9589	89.01714	35.13425	31.37951
295	78.86055	89.05247	34.9642	31.26402
296	79.02405	88.88124	35.2335	31.28425
297	79.27484	88.9745	35.0801	31.26064
298	79.04003	88.82642	35.27833	31.42917
299	79.01545	88.77078	35.13228	31.1619
300	78.96381	89.24062	35.29525	31.43336
301	78.82736	88.82642	35.27191	31.4001
302	78.66016	89.00049	35.39423	31.5913
303	78.99701	88.92334	35.36238	31.62282
304	78.86055	88.85769	35.54108	31.64376
305	78.79908	88.576	35.44052	31.53187
306	78.6995	88.95596	35.42754	31.52559
307	78.87161	88.9588	35.51446	31.43824
308	78.76589	88.98465	35.46058	31.59119

309	79.15068	88.86256	35.51525	31.55792
310	78.80154	89.23426	35.52587	31.45825
311	78.79785	88.77931	35.59667	31.60433
312	78.74868	88.89951	35.5909	31.67691
313	78.89128	88.98763	35.49742	31.89068
314	78.97857	89.31683	35.54698	31.54048
315	79.12855	89.05328	35.63784	31.78786
316	78.89251	88.98966	35.30665	31.84276
317	78.91833	88.74452	35.74888	31.64504
318	78.9589	88.89085	35.59549	31.75053
319	78.69704	88.96354	35.5277	31.8573
320	78.74376	88.92185	35.79451	31.71575
321	78.78064	88.77322	35.80618	31.76763
322	79.12855	88.88246	35.69225	31.90475
323	78.71303	88.89383	35.89022	31.71517
324	78.75728	88.80354	35.59273	31.883
325	78.66016	88.83075	35.96259	31.88114
326	78.97611	88.86946	35.8404	31.81589
327	78.96136	88.92185	35.75151	31.95372
328	78.78433	88.98628	36.1055	32.0677
329	78.69213	88.5117	35.8695	32.12097
330	78.59624	89.04503	35.98173	31.9736
331	78.84703	88.72842	36.06722	31.9793
332	78.56304	88.63082	36.02041	31.94523
333	78.62697	88.78811	35.95958	32.09387
334	78.83227	88.99927	36.08911	31.94674
335	78.68598	88.66777	36.12792	32.18296
336	78.70073	88.73085	36.00927	32.12504
337	78.5655	88.72192	36.01504	32.42767
338	78.71057	88.82236	36.13762	32.12027
339	78.78433	88.73532	36.0448	32.26274
340	78.65279	88.82926	36.1506	32.1055
341	78.84088	88.80963	36.2429	32.09724

342	78.77695	88.47434	36.11232	32.10247
343	78.77572	88.83982	36.25392	32.03955
344	78.83842	88.67522	36.18482	32.07816
345	78.92939	88.94946	36.3082	32.03269
346	78.91464	88.77119	36.16542	32.0777
347	78.83965	88.66453	36.3887	32.07514
348	78.61591	88.58439	36.1506	32.36079
349	78.62451	88.60971	36.45989	32.12678
350	79.11748	88.84104	36.54104	32.06188
351	78.99701	88.82845	36.62128	32.37417
352	78.60238	88.84821	36.41216	32.42836
353	78.7622	88.61959	36.44416	32.37207
354	78.92693	88.57153	36.5202	32.30985
355	78.77326	88.75806	36.4747	32.2817
356	78.64787	88.71366	36.69549	32.39859
357	78.83719	88.40666	36.39787	32.44127
358	78.67246	88.79298	36.63099	32.43872
359	78.37372	88.79312	36.47379	32.57956
360	79.06831	88.86283	36.65301	32.47768
361	78.66754	88.7027	36.58287	32.57468
362	78.67614	88.78662	36.70165	32.52851
363	78.57903	88.97139	36.55717	32.36172
364	78.73392	88.82263	36.53724	32.57352
365	79.08429	88.73437	36.70192	34.49084
366	79.12609	88.82236	36.39918	32.73088
367	78.72901	88.52971	36.72669	32.55095
368	78.95029	88.5251	36.81598	32.68412
369	78.84088	88.772	36.80772	32.37533
370	79.03143	88.7138	36.66717	33.07992
371	79.01176	88.9186	36.68644	32.6811
372	79.04126	88.52592	36.6829	32.69785
373	78.95275	88.5293	36.7655	32.76065
374	78.52125	88.84469	36.73994	32.56619

375	78.71794	88.54703	36.90959	32.79706
376	78.73147	88.38501	36.70139	32.79392
377	78.63558	88.79948	36.74925	32.68773
378	78.90726	88.93809	36.67596	32.98117
379	78.89005	88.69336	36.81008	32.771
380	78.89743	88.70771	36.8325	32.73716
381	78.91218	88.656	36.94119	32.9172
382	78.66016	88.55759	36.87563	32.90778
383	78.94414	89.00266	36.83237	32.91022
384	78.85071	88.65194	36.90776	32.80427
385	79.17649	88.97125	36.9269	32.98687
386	78.81506	88.5917	36.80549	33.01781
387	78.84457	88.38541	36.91916	33.15703
388	78.81629	88.7854	36.99285	33.0099
389	79.0093	88.2445	36.94329	33.03479
390	78.88022	88.84713	37.07912	32.89766
391	78.93308	88.60957	37.34566	33.06922
392	78.8335	88.69999	37.24235	32.95907
393	78.91833	88.58128	37.2999	33.03223
394	78.93185	88.66101	37.23671	33.17017
395	78.94414	88.6736	37.20813	33.08748
396	78.81629	88.55204	37.10324	33.00618
397	78.68598	88.545	37.22556	33.18192
398	78.74868	88.72625	37.21744	33.08922
399	78.77081	88.50439	37.22596	33.12318
400	78.76466	88.77877	37.23015	33.38673
401	79.03266	88.58196	37.3589	33.12562
402	78.75605	88.60064	37.17142	33.32323
403	78.69827	88.74791	37.30213	33.15284
404	79.06954	88.37242	37.32809	33.38208
405	78.79047	88.54636	37.40623	33.43326
406	78.74499	88.6625	37.29099	33.3979
407	78.73392	88.55475	37.45199	33.27368

408	78.98717	88.6024	37.45448	33.39255
409	78.92448	88.35414	37.40676	33.33695
410	79.05725	88.7008	37.43652	33.24135
411	78.7204	88.65031	37.369	33.57085
412	78.77326	88.59333	37.29938	33.30102
413	78.49666	88.39408	37.55491	33.35056
414	78.87776	88.63421	37.65482	33.31044
415	78.81752	88.47827	37.71893	33.2567
416	79.10519	88.48071	37.63423	33.26775
417	78.79785	88.50521	37.479	33.41139
418	78.7622	88.65316	37.7184	33.28973
419	77.84633	88.54175	37.39129	33.39569
420	78.21391	88.62284	37.54586	33.62109
421	78.03565	88.43523	37.68261	33.61958
422	77.97049	88.57641	37.61299	33.46105
423	77.93115	88.58981	37.73741	33.69658
424	77.93853	88.71705	37.67619	33.45466
425	77.83649	88.54757	37.65534	33.50839
426	78.17334	88.69336	37.57917	33.48338
427	78.07868	88.74534	37.71486	33.57376
428	77.95697	88.74926	37.83811	33.50374
429	78.03811	88.65722	38.07345	33.75996
430	78.03319	88.33059	37.69992	33.68948
431	78.06392	88.38758	37.9131	33.77601
432	78.11679	88.71285	37.62794	33.60376
433	78.134	88.60592	37.70031	33.70041
434	78.58886	88.45336	37.76678	33.62435
435	78.43765	88.48247	37.7382	33.57515
436	78.42413	88.51861	37.87442	33.64517
437	78.29504	88.78946	37.75944	33.69809
438	78.42658	88.44118	37.86026	33.64133
439	78.25939	88.45932	37.9131	33.619
440	78.29504	88.37499	37.8149	33.78474

441	78.25324	88.50439	37.90196	33.69937
442	78.17457	88.46704	37.69428	33.80858
443	78.41306	88.51157	37.82552	33.85103
444	78.37372	88.41844	37.94797	33.8273
445	78.24833	88.51292	37.81005	33.96478
446	78.40691	88.2533	38.11186	33.82765
447	78.41183	88.46419	37.84938	33.79869
448	78.76466	88.4581	38.21937	33.6775
449	78.51756	88.49262	37.74397	33.9799
450	78.47945	88.40924	38.01523	34.07085
451	78.61714	88.55204	38.01366	33.95501
452	78.53477	88.47543	38.03202	33.82893
453	78.65402	88.69539	38.18659	34.07876
454	78.49543	88.25844	37.96672	33.88697
455	78.66631	88.51238	37.95715	33.92907
456	78.80892	88.24098	38.0779	33.92872
457	78.74622	88.60795	38.15028	33.77532
458	78.50526	88.30609	37.94771	33.95955
459	78.47084	88.42656	38.24717	33.75298
460	78.55198	88.43712	38.06519	33.97199
461	78.66754	88.53485	38.24113	34.01944
462	78.41798	88.22542	38.11933	34.36394
463	78.70565	88.43956	38.18292	34.29521
464	78.49912	88.37946	38.30315	34.00409
465	78.65647	88.55326	38.15985	34.07736
466	78.59132	88.53864	38.01838	34.13528
467	78.64541	88.37905	38.19105	34.09365
468	78.29381	88.65857	38.08865	34.30265
469	78.40937	88.53526	38.03792	34.15355
470	78.59992	88.45296	38.21845	34.13912
471	78.68844	88.46731	38.29436	34.19565
472	78.73147	88.14325	38.29004	34.25252
473	78.55567	88.70324	38.29266	34.10156

474	78.39831	88.29188	38.33435	34.14796
475	78.68967	88.47665	37.96659	34.43954
476	78.29873	88.66087	38.37578	34.30544
477	78.536	88.64341	38.1744	34.12656
478	78.71425	88.61498	38.08105	34.27881
479	78.84457	88.29648	38.39624	34.38372
480	78.88022	88.46365	38.55422	34.49595
481	78.92816	88.51401	38.40554	34.36348
482	78.73761	88.57803	38.20941	34.58632
483	78.56673	88.35496	38.40948	34.56178
484	78.85686	88.57343	38.38378	34.35557
485	78.53723	88.33736	38.48133	34.45408
486	78.63435	88.39313	38.41643	34.43047
487	78.81014	88.35062	38.40109	34.69344
488	78.58517	88.29188	38.50388	34.50793
489	78.6909	88.4872	38.44698	34.52247
490	78.47453	88.43563	38.67471	34.51491
491	78.62451	88.51455	38.36385	34.6418
492	78.85194	88.21499	38.37277	34.61982
493	78.7831	88.3578	38.426	34.70705
494	78.70811	88.2935	38.39978	34.87558
495	78.78802	88.31841	38.59854	34.58469
496	78.63189	88.45458	38.50702	34.80684
497	78.61591	88.31191	38.55121	34.71333
498	78.46469	88.47922	38.47451	34.86255
499	78.70442	88.42656	38.57533	34.93059
500	78.48436	88.40355	38.51489	34.75485
501	78.50526	88.39164	38.53954	34.7595
502	78.70565	88.44944	38.40423	34.72926
503	78.91341	88.50385	38.89406	34.8251
504	78.74868	88.32112	38.84004	35.21566
505	78.46961	88.50142	38.62568	35.3422
506	79.16297	88.03727	38.56209	35.22892

507	78.5446	88.41289	38.61833	35.41896
508	78.49051	88.35062	38.6734	35.07167
509	78.97119	88.40111	38.68297	35.2894
510	78.70811	88.67508	38.75718	35.17658
511	78.51264	88.44078	38.63538	35.14948
512	78.72532	88.40355	38.68087	35.14204
513	78.80277	88.5825	38.73673	35.16216
514	78.55075	88.20146	38.68926	35.20287
515	78.65402	88.6024	38.69412	35.2038
516	78.75482	88.51157	38.65046	35.16321
517	78.77449	88.41844	38.79887	35.33278
518	78.65156	88.20227	38.81434	35.32906
519	78.86547	88.20511	38.80044	35.29068
520	78.34791	88.14921	38.6692	35.41699
521	78.69581	88.18142	38.89393	35.31685
522	78.75851	88.00221	38.86875	35.17751
523	78.78556	88.47556	38.61204	35.47851
524	78.59132	88.12633	38.6949	35.34162
525	78.63926	88.30041	38.64311	35.40745
526	78.60853	88.28525	38.84764	35.365
527	78.54829	88.31029	39.13281	35.26893
528	78.74991	88.45174	38.84555	35.35558
529	78.68967	88.24572	38.96984	35.18763
530	78.70565	87.92708	38.85604	35.43432
531	78.39093	88.47137	38.93273	35.06423
532	78.85563	88.43184	39.07525	35.39361
533	78.79662	88.42331	38.81578	35.46828
534	78.53477	88.10725	38.88435	35.23462
535	78.65402	88.25154	39.12402	35.43059
536	78.73147	88.2089	38.84135	35.3108
537	78.55321	88.42819	39.13949	35.10842
538	78.43888	88.10982	38.88921	35.35127
539	78.8335	88.28132	39.13176	35.28428

540	78.60976	87.98204	39.01127	35.26625
541	78.62697	88.3578	38.97941	35.45176
542	78.66385	88.33208	39.08285	35.40443
543	78.94169	88.14203	38.99344	35.36046
544	78.98963	87.9172	39.09046	35.37605
545	78.64172	88.00789	39.12809	35.3693
546	78.54829	88.16071	39.16571	35.39024
547	78.84457	88.17587	38.9212	35.41687
548	78.82367	88.14975	39.11511	35.57214
549	78.55444	88.18481	39.08128	35.29649
550	78.78064	87.76573	39.0253	35.50678
551	78.83965	87.91355	39.04654	35.43583
552	78.74868	87.76059	39.31623	35.55632
553	78.74376	88.13879	39.06214	35.40315
554	78.77572	88.09398	39.38572	35.42792
555	78.57042	88.17452	39.31846	35.63588
556	78.71425	88.11659	39.30403	35.37233
557	78.69213	88.17249	39.16978	35.53318
558	78.70319	87.83856	39.33956	35.48677
559	78.77818	88.0975	39.19797	35.41594
560	78.70073	88.2981	39.45468	35.50573
561	79.00561	88.10522	39.10855	35.67437
562	78.46347	88.06488	39.25566	35.48479
563	78.73147	88.11212	39.14736	35.48026
564	78.85809	87.99557	39.29027	35.63204
565	78.63558	88.36836	39.37667	35.39186
566	78.74622	88.0351	39.26746	35.41012
567	78.82981	88.3398	39.30574	35.67926
568	78.62574	88.23205	39.43934	35.67856
569	78.60115	88.13743	39.16873	35.79847
570	78.53108	88.23191	39.3806	35.58749
571	78.63066	88.11022	39.14788	35.56923
572	78.75482	87.7859	39.46359	35.52015

573	78.77081	87.94752	39.29591	35.56563
574	78.85563	88.3777	39.19587	35.47665
575	78.68475	88.26047	39.30102	35.584
576	78.76589	87.90989	39.15785	35.59645
577	78.89866	88.27712	39.3747	35.34709
578	78.81137	88.13391	39.30875	35.64762
579	78.75482	88.19158	39.35294	35.79522
580	78.91833	87.82177	39.21855	35.71927
581	78.61468	87.93656	39.16362	35.63588
582	78.70565	88.00505	39.37221	35.60424
583	78.61222	88.03957	39.19587	35.71648
584	78.74868	88.11374	39.34979	35.73509
585	78.88022	87.82881	39.44878	36.04784
586	78.80892	88.06704	39.56599	35.57563
587	78.96504	88.13621	39.40905	35.95386
588	78.85809	88.22068	39.44865	35.9028
589	78.88514	88.13351	39.43514	35.69996
590	78.82859	88.05175	39.5496	35.76137
591	78.77081	87.76208	39.46294	35.5597
592	78.58763	87.72012	39.52063	35.72846
593	78.63066	88.1396	39.45651	35.76893
594	78.85686	87.99476	39.66406	35.54958
595	78.58517	88.02589	39.51643	35.68007
596	78.59378	88.02711	39.32449	35.8229
597	78.59378	87.93493	39.47684	35.91711
598	78.59132	87.82637	39.61463	35.77719
599	78.57165	87.83598	39.44786	35.68833
600	78.63066	88.22623	39.46346	35.55702
601	78.60361	87.72837	39.7776	35.77103
602	78.59255	87.92911	39.39568	35.49689
603	78.65279	87.95442	39.66773	35.88524
604	78.66877	87.7878	39.48365	35.91397
605	78.86547	87.41041	39.61044	35.70357

606	78.54583	87.63998	39.6832	35.89303
607	78.80646	87.57135	39.48418	35.77137
608	78.64172	87.87862	39.55275	35.76533
609	78.72163	87.47565	39.65278	35.94874
610	78.60976	87.86021	39.29997	35.80301
611	78.938	87.68614	39.48628	35.74846
612	78.90235	87.53467	39.58225	35.69112
613	78.68229	87.73406	39.38939	35.84395
614	78.52002	87.69724	39.58631	35.94374
615	78.70073	87.73284	39.59536	36.06761
616	78.55567	87.93195	39.72358	35.84221
617	78.81383	87.85399	39.87934	35.91187
618	78.67	87.63186	39.87239	36.059
619	78.60361	87.69656	39.69815	36.05353
620	78.86547	87.73243	39.74115	35.86558
621	78.88268	87.72742	39.83988	36.00073
622	78.8544	87.80296	39.71139	36.07935
623	78.6577	88.02657	39.7127	36.06807
624	78.74622	87.81636	39.91081	35.85186
625	78.59009	87.58909	39.90648	36.12262
626	78.65279	88.01195	39.74994	35.91629
627	78.96136	87.97608	39.7936	35.98538
628	78.75851	87.78549	39.92628	36.16461
629	78.58148	87.84966	39.72149	36.09099
630	78.61959	88.16775	39.8425	36.04121
631	78.78187	87.73108	39.7561	35.9556
632	78.81137	87.71484	39.88694	36.30069
633	78.7204	87.76912	39.91658	36.13355
634	78.58886	87.72918	39.73761	36.01004
635	78.60238	87.63755	39.64544	36.11262
636	78.56304	87.74705	39.53295	36.02446
637	78.77449	87.98447	39.80867	36.11053
638	78.49666	88.20552	39.84696	36.03818

639	78.59992	88.03226	39.76514	36.07435
640	78.81014	87.6837	39.93008	36.15426
641	78.76589	87.79822	39.89298	36.16391
642	78.51756	87.95591	39.89874	36.05877
643	78.7118	88.16816	39.73958	36.23939
644	78.53354	87.98813	39.92457	36.06493
645	78.6073	87.56377	39.85076	36.30883
646	78.87776	87.8234	39.81615	36.19438
647	78.70319	87.88228	40.10498	35.99352
648	78.54337	88.00004	39.96259	36.12006
649	78.78064	87.9241	39.95958	36.19427
650	78.71057	87.93777	40.06276	36.24346
651	78.8458	87.91314	39.83699	36.26626
652	78.73392	87.8127	39.85089	36.17752
653	78.68967	87.96376	39.95709	36.37791
654	78.49051	87.94305	39.89625	36.40339
655	78.82613	87.92383	39.9247	36.32104
656	78.59132	87.93493	40.03523	36.42037
657	78.7831	87.79118	39.95079	36.27673
658	78.4315	87.91273	39.82218	36.31616
659	78.61836	88.15327	39.87934	36.23067
660	78.71303	87.60817	39.97557	36.25195
661	78.79416	87.73149	40.0427	36.08947
662	78.39462	87.7794	39.90832	36.72916
663	78.62943	88.06935	40.2096	36.32883
664	78.36266	87.80269	39.96981	36.32011
665	78.22497	87.81446	39.95748	36.37373
666	78.91341	87.73852	39.92536	36.28813
667	78.51264	87.75409	40.18273	36.37536
668	78.48068	87.92627	39.95735	36.46573
669	78.65156	87.97026	39.94253	36.18019
670	78.63558	87.92546	40.07495	36.29522
671	78.88391	87.96173	40.23465	36.38745

672	78.80277	87.92451	40.01556	36.33884
673	78.74253	87.87267	40.14536	36.65054
674	78.79416	87.98055	40.31436	36.74475
675	78.54829	87.93358	40.13094	36.44398
676	78.61836	88.16274	40.02448	36.49806
677	78.5655	88.03889	40.16031	36.61216
678	78.89374	88.06095	39.88681	36.53632
679	78.73761	87.68045	40.07364	36.46398
680	78.7204	87.41271	40.03956	36.4748
681	78.83965	87.6324	39.9091	36.4627
682	78.81014	87.77534	39.92287	36.46317
683	78.64787	87.79307	39.82323	36.49434
684	78.81752	87.73717	40.3415	36.3935
685	78.61345	87.8529	40.04978	36.45561
686	78.58763	87.87686	40.34845	36.52818
687	78.58763	87.7258	40.20777	36.554
688	78.74991	87.7078	40.0406	36.60646
689	78.54337	88.01114	40.06224	36.75603
690	78.74868	87.86874	40.11075	36.50562
691	78.76712	87.82191	40.2117	36.44467
692	78.8126	87.91327	40.31475	36.49748
693	78.87899	87.78062	40.25982	36.46421
694	78.91218	87.92573	40.30387	36.54807
695	78.61099	87.84532	40.23805	36.539
696	78.8126	87.94251	40.25785	36.55877
697	78.9257	87.80675	40.42764	36.64565
698	78.63926	87.90583	40.59847	36.58122
699	78.53477	87.99029	40.3689	36.73149
700	78.59624	87.82867	40.40535	36.73067
701	78.57288	87.77967	40.35802	36.61844
702	78.68106	87.97798	40.27935	36.66333
703	78.85071	87.86184	40.37742	36.54156
704	78.77326	87.54482	40.44888	36.88734

705	78.98103	88.03564	40.261	36.61251
706	78.78187	87.81554	40.25012	36.52435
707	78.59132	87.88999	40.28761	36.71195
708	78.52739	87.95767	40.41243	36.72207
709	78.58025	87.60289	40.43537	36.78452
710	78.75236	88.19658	40.34176	36.69776
711	78.80154	88.07314	40.44626	36.62623
712	78.90112	87.55917	40.3221	36.7059
713	79.06708	87.90705	40.38031	36.87524
714	78.7327	87.90827	40.33888	36.7936
715	78.72655	87.71511	40.59742	36.88059
716	78.78064	87.93805	40.481	36.71276
717	78.53354	87.72377	40.41571	36.90269
718	78.81998	88.13215	40.48179	36.68938
719	78.68721	87.65352	40.43616	36.92665
720	78.65525	87.87321	40.32944	36.55877
721	78.69704	87.92018	40.15729	36.98748
722	78.92448	87.87443	40.01582	37.04121
723	78.59132	87.70468	40.13212	36.74312
724	78.5655	87.86861	39.93375	36.63239
725	78.8753	87.91761	40.1236	36.88245
726	78.86547	87.86346	40.31659	36.82046
727	78.93677	87.91233	40.19885	37.09146
728	78.56304	87.7568	40.19584	37.131
729	78.65033	87.62279	40.14352	36.71148
730	78.67614	87.66326	40.24094	36.89315
731	78.86301	87.77656	40.11914	36.71695
732	78.63066	87.94955	40.09764	36.93002
733	78.93431	87.69277	40.33245	36.93305
734	78.47453	87.77128	40.28276	37.02109
735	78.66385	87.91964	40.2353	36.87873
736	78.74991	87.73	40.2353	36.99062
737	78.61714	87.78184	40.33927	36.82837

738	78.64295	87.85236	40.24972	36.94596
739	78.85932	87.80945	40.22389	37.06308
740	78.68229	87.96755	40.13815	37.09437
741	78.6786	88.08803	40.22258	37.13391
742	78.69458	88.04281	40.36195	37.03493
743	78.59132	87.64959	40.48415	36.89246
744	78.8458	87.67369	40.35723	37.0789
745	78.56919	87.90299	40.37179	36.94933
746	78.43396	87.98163	40.36221	37.07843
747	78.77695	88.03727	40.23622	36.9955
748	78.81875	88.03185	40.38621	37.15287
749	78.66385	86.61544	40.61447	36.96166
750	78.57657	86.04922	40.37611	37.11902
751	78.60607	86.5705	40.3963	36.99958
752	78.77449	86.99594	40.45176	37.0882
753	78.84825	86.89428	40.37047	37.13589
754	78.68475	86.76068	40.44953	37.07064
755	78.62451	86.7619	40.46382	37.32058
756	78.57165	86.85056	40.32944	37.05796
757	78.58394	86.98484	40.363	37.14612
758	78.79539	87.08825	40.45163	37.19357
759	78.73147	87.23024	40.59323	37.07343
760	78.85932	87.28588	40.55206	37.0468
761	78.80277	87.49867	40.49595	37.21486
762	78.49543	87.32852	40.62378	37.21881
763	78.67983	87.42868	40.42672	37.10425
764	78.59132	87.61683	40.55966	37.25975
765	78.72655	87.9103	40.46868	37.1167
766	78.76466	87.68045	40.53423	37.24859
767	78.50526	87.877	40.42318	37.23417
768	78.44625	87.79416	40.44599	37.2651
769	78.63558	87.79456	40.40653	37.05226
770	78.64172	88.10495	40.48716	37.23975

771	78.4315	88.06907	40.62522	37.13612
772	78.72286	87.90001	40.63164	37.17729
773	78.96996	87.88065	40.39788	37.33547
774	78.62943	87.77412	40.58969	37.36396
775	78.8126	88.21459	40.48179	37.26441
776	78.49789	87.83192	40.58654	37.29069
777	78.77326	87.97243	40.68999	37.24917
778	78.76466	88.02955	40.70113	37.33128
779	78.92693	88.07273	40.6639	37.427
780	78.34913	88.1779	40.9859	37.06157
781	78.59255	87.96173	40.58431	37.47387
782	78.72655	88.08857	39.28856	36.65961
783	78.77081	88.2441	38.55462	36.83558
784	78.66631	88.30609	38.80018	36.83884
785	78.63558	88.60767	39.08784	37.09064
786	78.804	88.14203	39.36408	36.94352
787	78.64049	87.89446	39.42007	37.11228
788	78.4524	88.34981	39.73407	37.11635
789	78.95767	88.13621	39.81824	37.05924
790	78.91341	88.57383	39.74115	37.20265
791	78.71548	88.50832	39.69605	37.15705
792	78.7917	88.63894	40.03234	37.01469
793	78.81875	88.28701	40.01871	37.33454
794	78.85932	88.47759	40.32026	37.18427
795	78.95275	88.30217	40.09318	37.32849
796	78.75236	88.34318	40.12307	37.45213
797	78.88759	88.1174	40.48231	37.47888
798	78.41921	88.12674	40.35068	37.30383
799	78.58025	88.37445	40.40614	37.30639
800	78.98963	88.49939	40.38018	37.26778
801	78.81998	88.4979	40.36785	37.3043
802	78.72409	88.62189	40.45019	37.41374
803	78.71057	88.61282	40.45517	37.33082

804	78.71917	88.36403	40.26533	37.49202
805	78.8753	88.5423	40.41243	37.3371
806	78.95644	88.57993	40.49411	37.4241
807	78.9257	88.45377	40.31318	37.54063
808	78.94414	88.53458	40.63781	37.42375
809	78.71057	88.38541	40.50499	37.43689
810	78.50772	88.61079	40.83342	37.35059
811	78.67	88.35821	40.71582	37.50586
812	78.71548	88.51522	40.52309	37.24789
813	78.73392	88.48693	40.71175	37.36059
814	78.97734	88.63908	40.61499	37.54087
815	78.78187	88.49614	40.60582	37.58634
816	78.70319	88.52876	40.62469	37.5468
817	78.76343	88.53905	40.70467	37.44038
818	78.73515	88.47719	40.88639	37.73847
819	78.88391	88.576	40.68881	37.4241
820	78.66262	88.95149	40.83486	37.66008
821	78.63558	88.81667	40.68671	37.57971
822	78.52862	88.66344	40.77757	37.51668
823	78.71671	88.5362	40.69759	37.47015
824	78.64787	88.3444	40.83067	37.60902
825	78.66754	88.69986	40.91523	37.79139
826	78.59378	88.56869	41.04149	37.65252
827	78.54091	88.84821	40.76275	37.68823
828	78.87161	88.82561	40.91445	37.61879
829	78.61959	88.5002	40.85715	37.51795
830	78.87776	88.72273	40.75751	37.43433
831	78.76466	88.53377	41.00976	37.67241
832	78.83596	88.53011	40.64121	37.5126
833	78.82613	88.62568	40.97659	37.53505
834	78.72286	88.93687	40.8013	37.54819
835	78.64787	88.69877	40.90501	37.58855
836	78.48559	88.43184	41.01016	38.92166

837	78.52862	88.77999	40.95338	37.9676
838	78.59501	88.65356	40.74531	37.56797
839	78.52002	88.80205	40.85899	37.6502
840	78.52125	88.83048	40.80759	37.50237
841	78.62574	88.73776	40.9758	37.69521
842	79.00438	88.47759	40.88901	37.87851
843	78.66016	88.49857	40.72617	37.61693
844	78.48068	88.58006	40.65787	37.66753
845	78.64295	88.6893	41.07977	37.87688
846	78.8126	88.36389	41.14336	37.9191
847	78.67983	88.70189	41.05919	37.83966
848	78.60361	88.72666	41.14651	37.85792
849	78.67983	88.60429	41.05867	37.75057
850	78.74991	88.74304	40.84784	37.71742
851	78.8126	88.80083	41.03834	37.81849
852	78.80892	88.44375	41.07138	37.80547
853	78.74991	88.77281	41.13051	37.91003
854	78.74745	88.65329	40.87577	38.04413
855	78.92079	88.51035	40.92625	37.92387
856	78.89005	88.72842	40.79107	37.79116
857	78.81998	88.70649	41.06024	37.78383
858	78.81506	88.65437	40.98734	37.79918
859	78.76712	88.46934	41.0116	37.77336
860	78.68844	88.57438	41.07047	37.62589
861	78.71548	88.558	41.11347	37.9869
862	78.82981	88.68903	41.04713	37.71719
863	78.71548	88.81586	41.07899	37.68276
864	79.00807	88.86296	41.09472	37.88013
865	78.79539	89.10431	40.87524	37.84327
866	78.67123	88.54148	40.91261	38.0204
867	78.78556	88.57519	40.96728	37.91003
868	78.47945	88.70351	41.03441	37.97341
869	78.87161	88.65085	40.96794	37.98737

870	78.55936	88.52808	41.20813	37.86164
871	78.5655	88.4355	41.15333	37.79779
872	78.57534	88.64964	40.99259	37.92305
873	78.74253	88.53769	40.91877	38.05727
874	78.73147	88.7988	41.0643	37.98016
875	78.64172	88.50588	41.05683	38.00772
876	78.75114	88.69512	41.32836	37.94783
877	78.65525	88.80205	41.08725	38.01145
878	78.75605	88.68442	41.14821	38.06157
879	78.65893	88.67969	41.15411	38.07297
880	78.83842	88.55001	41.24458	38.10879
881	78.55567	88.66629	41.11399	38.04471
882	78.63435	88.89667	41.18217	37.88269
883	78.70073	88.6162	41.06483	37.88979
884	78.76958	88.67062	41.16211	38.00656
885	78.82736	88.62392	41.18964	37.88979
886	78.55936	88.62527	41.33452	37.8278
887	78.49666	88.66128	41.07191	38.00051
888	78.62943	88.67278	41.32587	38.16148
889	78.7831	88.76551	40.8835	38.05006
890	78.64787	88.73857	41.34658	38.00656
891	78.75728	88.99372	41.29768	38.2308
892	78.54583	88.7031	41.18807	38.06122
893	78.8249	88.65695	41.098	38.10147
894	79.072	88.56815	41.19266	37.93073
895	78.82367	89.04421	41.15923	37.95364
896	78.85317	88.61377	41.1174	37.88223
897	78.88268	88.50142	41.31551	38.22789
898	78.89497	88.68808	41.35484	38.02296
899	78.6491	88.91779	41.12068	37.88886
900	78.59747	88.89139	41.2649	38.30163
901	78.84825	88.48571	41.2021	38.12136
902	78.36758	88.81789	41.20013	38.33606

903	78.67737	88.44294	41.29361	38.08042
904	78.60115	88.74831	41.31774	38.18788
905	78.86915	88.45052	41.20708	38.18846
906	78.63312	88.81464	41.19646	38.03692
907	78.87776	88.77268	41.48936	38.18497
908	78.74868	88.56856	41.14336	37.96574
909	78.76712		41.45789	38.29663
910	78.74868		41.34711	38.12694
911	78.8458		41.13838	38.34687
912	79.04987		41.39837	37.98283
913	78.84334		41.15359	38.27628
914	78.64295		41.40794	38.10228
915	78.81383		41.47782	37.96667
916	78.95767		41.4398	38.10333
917	78.74868		41.20734	38.2736
918	78.6786		41.21704	38.27779
919	78.74376		41.24025	38.31698
920	78.82613		41.34579	38.22475
921	78.89743		41.32914	38.23324
922	78.92202		41.23383	38.21347
923	78.66508		41.42643	38.06844
924	78.78802		41.32587	38.23347
925	78.93677		41.47061	38.23313
926	78.92202		41.40558	38.27918
927	78.536		41.43783	38.21568
928	78.90726		41.25192	38.40619
929	78.82736		41.48818	38.50319
930	78.58763		41.43639	38.45097
931	78.97242		41.48936	38.52017
932	78.76343		41.37818	38.41294
933	78.87776		41.47835	38.37549
934	78.81875		41.23186	38.21184
935	78.97242		41.50863	38.36199

936	78.66262		41.42	38.22301
937	78.82121		41.36585	38.01145
938	78.74253		41.34973	38.4961
939	78.85317		41.42813	38.27418
940	78.99209		41.34147	38.37037
941	78.78556		41.4731	38.45132
942	78.82981		41.49368	38.33524
943	78.82613		41.23134	38.35269
944	78.88268		41.34868	38.36676
945	78.7327		41.46576	38.28186
946	78.83965		41.55019	38.49319
947	79.0302		41.44701	38.34734
948	78.81629		41.49014	38.3221
949	78.85194		41.79314	38.33245
950	79.00192		41.29296	38.50773
951	78.78064		41.35681	38.31803
952	78.79908		41.60211	38.58577
953	78.89497		41.54901	38.41038
954	78.80892		41.5991	38.41038
955	78.85809		41.32901	38.40352
956	79.02405		41.59425	38.3057
957	78.64295		41.57183	38.49633
958	78.92693		41.58507	38.55134
959	78.80277		41.34789	38.49342
960	78.88759		41.25507	38.57739
961	79.03266		41.67514	38.25011
962	78.95521		41.5637	38.49959
963	78.96259		41.72693	38.56937
964	79.13838		41.69179	38.57321
965	78.74007		41.69179	38.40165
966	78.69827		41.83155	38.49993
967	78.98103		41.58166	38.6566
968	79.04495		41.81752	38.61054

969	78.72655		41.85633	38.47912
970	78.8962		41.66872	38.39142
971	78.94169		41.72431	38.56355
972	78.89497		41.45632	38.4198
973	78.91833		41.45527	38.48319
974	78.89497		41.66006	38.54925
975	79.03881		41.7837	38.45748
976	78.87899		41.81346	38.51354
977	78.98226		41.64079	38.44097
978	79.19002		41.71513	38.52494
979	79.11134		41.57537	38.64369
980	78.96873		41.61116	38.50796
981	79.14576		41.53433	38.45504
982	79.05602		41.63318	38.4947
983	78.79785		41.54246	38.60798
984	78.67123		41.65167	38.57635
985	79.00192		41.64905	38.42515
986	78.87038		41.68183	38.7864
987	78.79662		41.60775	38.6794
988	79.15191		41.73401	38.61775
989	78.90849		41.56829	38.59786
990	79.18387		41.7618	38.76139
991	78.94414		41.70084	38.63438
992	78.87776		41.61588	38.75081
993	78.77449		41.58402	38.62729
994	79.06462		41.80061	38.59461
995	78.75359		41.71736	38.5097
996	79.13224		41.72693	38.63171
997	78.86547		41.6577	38.67881
998	79.16174		41.6501	38.69719
999	79.0093		41.82119	38.63241
1000	79.02528		41.83195	38.58426
1001	78.86055		41.52214	38.71824

1002	78.84334		41.71736	38.65846
1003			41.85895	38.90922
1004			41.63568	38.62136
1005			41.70608	38.64288
1006			41.68602	38.52727
1007			41.76901	38.69231
1008			41.70438	38.70824
1009			41.56645	38.61915
1010			41.69625	38.79338
1011			41.74489	38.63532
1012			41.81451	38.94411
1013			41.70739	38.74302
1014			41.73663	38.84374
1015			41.7618	38.87119
1016			41.80572	38.74709
1017			41.60303	38.96481
1018			41.7736	38.89189
1019			41.54613	38.59054
1020			42.0686	38.66649
1021			41.72653	38.88072
1022			41.76377	38.80559
1023			41.88858	38.92294
1024			41.87574	38.91945
1025			41.83181	38.86339
1026			41.72234	38.82222
1027			41.90288	38.80501
1028			41.83286	38.88945
1029			41.82211	38.61659
1030				38.82385
1031				38.76895
1032				38.86188
1033				39.02436
1034				39.09775

1035				38.79559
1036				39.07135
1037				38.78198
1038				38.67184
1039				39.0289
1040				38.90015
1041				38.74523
1042				38.81396
1043				38.93655
1044				38.98063
1045				38.95853
1046				38.95365
1047				38.72929
1048				38.8349
1049				38.95272
1050				39.1252
1051				39.1473
1052				39.19603
1053				38.9462
1054				39.0296
1055				38.85409
1056				38.98458
1057				39.14474
1058				39.03006
1059				39.0446
1060				39.05041
1061				39.11171
1062				39.1908
1063				39.15358
1064				38.93062
1065				38.83164
1066				39.0118
1067				39.05576

1068				38.95365
1069				39.12869
1070				39.13753
1071				39.12346
1072				39.09089
1073				39.01669
1074				39.06949
1075				39.10299
1076				39.26709
1077				39.16672
1078				38.9647
1079				39.16184
1080				39.18649

Table Apx. 2. 4: Time course of percent vesicle fusion of all constructs at pH 5.12 in lipid:protein 100:1.

Time (s)	FPHM	G10V	L9R	V2E
1	17.33115	25.0919	1.05079	1.84672
2	30.03025	30.90909	1.51812	2.91136
3	35.37741	35.94409	2.10717	3.90603
4	39.55056	39.81964	2.85283	4.73343
5	42.30806	43.16139	3.37972	5.22671
6	45.66314	46.15095	3.71253	5.86392
7	48.76499	48.99787	4.3676	6.44559
8	50.75035	51.5338	4.77853	6.95394
9	53.00561	53.5051	5.18358	7.26462
10	55.07762	55.72375	5.48128	7.85273
11	57.24612	57.60884	5.90241	8.56017
12	59.11034	59.52962	6.32648	8.9836
13	60.53833	60.84142	6.69268	9.46116
14	62.03678	62.64161	7.10645	9.83897
15	63.31686	64.15102	7.45148	10.40943

16	64.92972	65.48984	7.68713	10.99175
17	65.82	66.96186	8.25014	11.29083
18	67.28621	68.10084	8.55157	11.8341
19	68.32364	69.75157	8.85878	12.08512
20	69.40876	70.56499	9.31796	12.55933
21	70.52339	71.42645	9.51001	13.19821
22	71.16492	72.37975	10.01482	13.45632
23	72.1731	73.25144	10.39019	13.80192
24	72.74317	74.54854	10.5947	14.09572
25	73.63345	75.82267	11.03213	14.66656
26	74.05538	76.25346	11.36041	14.96062
27	74.78468	76.90969	11.64757	15.27671
28	75.30819	77.65501	11.97902	15.59293
29	75.74107	78.22516	12.31499	16.03582
30	76.04024	79.03084	12.70452	16.28027
31	76.50287	79.45061	12.97142	16.4474
32	76.77465	79.89662	13.11942	16.81014
33	77.15125	80.67934	13.58007	17.20973
34	77.53184	80.92065	13.87856	17.54284
35	77.89736	81.64669	14.20921	17.77878
36	78.15557	82.36511	14.39424	18.12154
37	78.57986	82.44699	14.69873	18.5089
38	78.83558	82.83448	14.85737	18.71533
39	79.05681	83.37431	15.15541	18.97099
40	79.09814	83.43126	15.44201	19.04456
41	79.33606	83.85156	15.60304	19.50317
42	79.4491	84.35163	16.12766	19.73409
43	79.83342	84.57759	16.21497	19.98653
44	79.63049	84.74594	16.35085	20.29566
45	80.02888	85.2577	16.62035	20.73301
46	80.06125	85.50308	16.84875	20.91676
47	80.58041	85.38104	17.1828	21.13299
48	80.24551	85.74189	17.3539	21.24303

49	80.7547	86.00958	17.45525	21.62601
50	80.86675	86.21559	17.67968	21.91285
51	80.45342	86.32975	17.9562	22.03372
52	80.82318	86.53314	18.1358	22.25767
53	80.87796	86.625	18.43429	22.49954
54	81.11824	86.63156	18.68375	22.73239
55	81.06719	87.11313	18.65329	22.91924
56	80.98751	87.06327	18.95212	23.31767
57	81.14811	87.16562	19.16183	23.31471
58	81.25269	87.10395	19.31572	23.8277
59	81.39213	87.3572	19.35082	21.41068
60	81.40209	87.48842	19.89119	21.146
61	81.46807	87.54353	20.0299	21.60642
62	81.44193	88.02248	19.86141	21.11456
63	81.46309	87.87026	20.2215	21.68219
64	81.71582	87.8309	20.28106	22.24105
65	81.3859	88.09596	20.58363	22.77878
66	81.63988	87.90438	20.75133	23.07335
67	81.67349	88.02904	20.96399	23.287
68	81.6212	88.10515	20.98551	23.84484
69	81.93618	88.34921	21.3328	24.13387
70	81.99594	88.22324	21.24335	24.347
71	81.87518	88.27048	21.54195	24.66258
72	8.20E+01	88.2836	21.58781	25.03228
73	8.20E+01	88.37546	21.83467	25.37942
74	8.22E+01	88.38727	21.80624	25.70647
75	81.96108	88.41876	21.9727	25.79951
76	82.06068	88.43188	22.16011	26.26301
77	81.9449	88.60509	22.31751	26.43607
78	82.14285	88.73368	22.7486	26.57575
79	82.291	88.85572	22.59528	26.71918
80	82.26984	88.78092	22.93544	27.13062
81	82.28478	88.83866	22.95163	27.07869

82	82.19514	88.7035	23.02467	27.43576
83	82.38313	88.81766	23.28874	27.46811
84	82.22502	88.64708	23.43628	27.7351
85	82.42919	88.70744	23.39065	27.97272
86	82.34329	88.58803	23.35226	28.09063
87	82.43044	88.82422	23.58791	28.41922
88	82.30096	88.92133	23.59538	28.48468
89	82.37939	89.05255	23.76773	28.53055
90	82.4765	88.99087	24.0635	28.84574
91	82.49767	88.82291	24.06656	28.99754
92	82.67819	88.82947	23.92728	29.30912
93	82.65329	88.45419	24.30979	29.13954
94	82.38064	88.92133	24.58167	29.33025
95	82.51385	89.00662	25.15589	29.20075
96	82.50389	89.02105	24.99419	29.36569
97	82.56116	89.16802	24.9258	29.45164
98	82.85871	89.04074	25.1012	29.96115
99	82.77031	89.09585	25.07459	29.90097
100	82.72799	89.17852	25.63024	30.27441
101	82.59228	89.12603	25.38565	30.31538
102	82.81015	89.0696	25.23255	30.51589
103	82.46156	89.19951	25.55777	30.74062
104	82.68815	89.24806	25.38599	30.74191
105	82.61345	88.96463	25.28861	30.9611
106	82.57859	89.04992	25.37625	31.16856
107	82.76285	89.19032	25.51485	31.17913
108	82.85248	89.24937	25.74891	31.37435
109	82.84003	89.22575	25.79602	31.67215
110	82.80642	89.09716	25.82954	31.60346
111	82.84003	89.03417	25.98875	31.91904
112	82.83256	89.19164	25.85705	32.11413
113	82.96204	89.07223	25.85558	32.1497
114	82.74417	89.52231	26.28192	32.1613

115	82.91971	89.46326	26.36379	32.36992
116	83.11019	89.30842	26.38021	32.42095
117	82.71056	89.59973	26.4674	32.70186
118	82.87489	89.01318	26.452	32.71526
119	82.9471	88.87409	26.59241	32.64349
120	82.89481	89.21526	26.5812	32.92865
121	82.90228	89.32417	26.74551	33.18045
122	82.76658	89.55118	26.973	33.18418
123	83.19734	89.39371	26.9516	33.10558
124	83.30441	89.06042	27.02373	33.31072
125	82.89481	89.3386	27.06019	33.4803
126	83.06662	89.45407	27.01207	33.61599
127	83.2434	89.50263	27.30625	33.64576
128	82.67819	89.17064	27.33026	33.68661
129	83.11766	89.17589	27.43466	33.79987
130	82.79521	89.06435	27.43659	34.03762
131	83.09276	89.47245	27.55651	33.99046
132	83.31312	89.4895	27.40862	34.18375
133	82.95084	89.17195	27.78966	34.06816
134	82.97325	89.36091	27.64302	34.31544
135	83.01184	89.43046	27.73678	34.53295
136	8.33E+01	89.27955	27.85443	34.37755
137	8.28E+01	89.31498	27.90267	34.47046
138	8.29E+01	89.35041	28.07536	34.84595
139	8.31E+01	89.46326	27.84696	34.94041
140	8.33E+01	89.26118	28.17568	34.97713
141	8.30E+01	89.27824	28.24872	35.12416
142	8.31E+01	89.35828	28.14024	34.87856
143	8.34E+01	89.23363	28.39967	35.04466
144	8.33E+01	89.30186	28.34056	35.24864
145	8.32E+01	89.38322	28.23128	35.58922
146	8.33E+01	89.46588	28.3803	35.54527
147	8.33E+01	89.37666	28.65501	35.52968

148	8.33E+01	89.18901	28.68819	35.54283
149	8.32E+01	89.55774	28.72069	35.76756
150	8.33E+01	88.97513	28.65094	35.76524
151	8.32E+01	89.22707	28.6883	35.87168
152	8.32E+01	89.08404	28.74673	36.11612
153	8.31E+01	89.72045	28.87888	36.02347
154	8.34E+01	89.3386	29.01295	36.15542
155	83.22473	89.60891	28.90538	36.45386
156	83.23593	89.51706	28.88839	36.43363
157	83.282	89.44751	29.08124	36.39536
158	83.36541	89.43964	29.14363	36.66287
159	83.41148	89.38978	29.21406	36.61713
160	83.08156	89.43439	29.38539	36.66519
161	83.16124	89.48163	29.1374	36.8273
162	83.30814	89.59317	29.1904	36.44098
163	83.2434	89.16802	29.33624	36.86969
164	83.27951	89.34516	29.50225	36.90036
165	83.42268	89.05779	29.60597	37.11027
166	83.6779	89.20213	29.42989	37.08038
167	83.29445	89.22182	29.75227	37.30743
168	83.16248	89.63384	29.63236	37.33217
169	83.29943	89.39503	29.71876	37.47301
170	83.47995	89.39634	29.52761	37.50072
171	83.23718	89.3491	29.87027	37.40446
172	83.27702	89.43964	30.01566	37.72145
173	83.11019	89.46588	30.17148	37.6971
174	83.1326	89.44226	29.61118	37.73331
175	83.40152	89.16277	30.11486	37.76372
176	83.47123	89.0368	29.9467	37.82918
177	83.58453	89.33991	29.97852	37.71965
178	83.19112	89.22575	30.04012	37.89193
179	83.55216	89.28874	30.17816	37.97092
180	83.61067	89.28349	30.22039	38.08342

181	83.50609	89.14046	30.28392	38.11383
182	83.45256	89.25593	30.38934	38.2365
183	83.18365	89.18245	30.46838	38.3173
184	83.41148	89.53412	30.29853	38.3441
185	83.42891	89.00924	30.54278	38.28483
186	83.31561	89.11159	30.43679	38.59409
187	83.3318	89.31105	30.61502	38.38585
188	83.57083	89.1011	30.52489	38.49062
189	83.32557	89.3924	30.65013	38.54061
190	83.47497	89.21526	30.45162	38.63197
191	83.30814	89.19426	30.59374	38.72836
192	83.38035	89.231	30.76721	38.73751
193	83.36541	89.35828	30.84829	39.17138
194	83.28698	89.12472	30.76936	39.00515
195	83.52103	89.14702	30.81862	38.83415
196	83.47995	89.40946	30.94941	38.99342
197	83.28573	89.17589	30.89211	39.11043
198	83.38658	89.38584	30.92122	39.01198
199	83.58328	89.08404	31.03898	39.07267
200	83.35545	89.3819	31.00059	39.33245
201	83.343	89.15227	30.91148	39.34882
202	83.12638	89.01449	31.0041	39.63759
203	83.45879	89.39109	31.01724	39.27588
204	83.6916	89.25725	31.23046	39.51054
205	83.26706	89.20607	31.19819	39.70035
206	83.43887	89.22707	31.43089	39.51131
207	83.65425	89.15227	31.4327	39.61543
208	83.58079	88.96069	31.40881	39.73952
209	83.51979	89.24412	31.32128	39.83964
210	83.26581	89.39371	31.48275	39.72973
211	83.34425	89.13784	31.5644	39.94737
212	83.34798	89.21132	31.37778	40.06541
213	83.52228	89.00662	31.2958	39.84557

214	83.46128	89.05123	31.53881	40.09285
215	83.45754	89.07485	31.64468	39.90678
216	83.29943	88.95544	31.54288	39.87006
217	83.52228	89.27299	31.76664	40.30702
218	83.28449	88.93445	31.68352	40.28859
219	83.64553	89.3596	31.67662	40.4409
220	83.53099	89.0158	31.59044	40.35238
221	83.49364	89.48032	31.7389	40.48291
222	83.3679	89.17852	31.91124	40.50598
223	83.44385	89.17983	31.80616	40.56551
224	83.22349	88.96332	31.72621	40.42235
225	83.50858	89.26774	31.95189	40.48008
226	83.51979	89.11028	31.86232	40.48613
227	83.32557	89.08535	32.15663	40.19452
228	83.6281	89.23494	32.06185	40.36397
229	83.221	89.3058	31.89935	40.21965
230	83.33429	89.06829	31.99458	40.41487
231	83.54967	89.18245	32.12843	40.54399
232	83.7389	88.90427	32.18958	40.25676
233	83.29196	89.23363	31.99843	40.59863
234	83.65425	88.66807	32.12016	40.66112
235	83.50111	88.94757	32.2334	40.70519
236	83.77003	89.02499	32.09718	40.81563
237	83.24091	89.06304	32.21336	40.98469
238	83.46874	88.85834	32.19637	41.00621
239	83.46377	88.98956	32.32829	40.89204
240	83.51107	89.08797	32.45308	41.08919
241	83.43513	88.63658	32.55182	40.96343
242	83.30441	88.92264	32.45761	41.18107
243	83.16871	89.22969	32.20113	41.33209
244	83.27328	88.91083	32.52159	41.44665
245	83.21726	88.96463	32.3994	41.23687
246	83.653	89.13128	32.32489	41.31509

247	83.20606	88.72187	32.57979	41.25298
248	83.17369	89.17458	32.53631	41.28339
249	83.40401	89.09191	32.46576	41.53943
250	83.63557	89.29005	32.69076	41.66159
251	83.33553	89.05386	32.85869	41.70141
252	83.30565	89.10372	32.63981	41.6304
253	83.28324	88.86621	32.57707	41.5969
254	83.16746	89.06435	32.60448	41.58621
255	83.22473	89.02499	32.58896	41.65553
256	83.64802	88.96332	32.72779	41.80114
257	83.25834	88.68644	32.82302	41.89212
258	83.48866	89.17064	32.71013	41.8206
259	83.31561	88.87409	32.721	41.86867
260	83.20357	89.06042	32.76301	41.9666
261	83.21353	88.70219	32.79471	41.94456
262	83.29071	88.77042	32.80377	41.94379
263	83.1214	88.85309	32.97283	42.1126
264	83.47746	88.95938	32.73017	42.03502
265	83.55838	88.71006	32.88904	42.08747
266	83.38284	88.85178	32.99752	42.2028
267	83.36168	88.69825	32.97929	42.3841
268	83.49987	88.93707	32.92346	42.40485
269	83.32682	88.7245	32.93207	42.42688
270	83.15999	88.73893	33.13057	42.38848
271	83.0965	89.0473	32.92641	42.26555
272	83.59573	88.6064	33.05821	42.50085
273	83.39903	88.73237	33.07724	42.48655
274	83.31561	88.77042	33.0504	42.41838
275	83.3318	88.46731	33.31334	42.58229
276	83.39654	89.00399	33.1214	42.62301
277	83.13385	88.73893	33.21029	42.5466
278	83.26581	88.73893	33.36735	42.681
279	83.29943	88.47518	33.27144	42.77158

280	83.30939	88.72056	33.22071	42.90135
281	83.32184	89.13784	33.37607	42.81166
282	83.28449	88.51061	33.27348	43.13342
283	83.36915	88.74812	33.41819	42.59865
284	83.17369	88.71925	33.57933	42.83163
285	83.25212	88.48962	33.42657	42.92493
286	83.343	88.50536	33.4961	42.82545
287	83.11642	88.70219	33.41276	42.79272
288	83.60943	88.84128	33.61783	43.01152
289	83.2932	88.68382	33.52396	43.00198
290	83.40152	88.6169	33.64116	42.98781
291	83.35047	88.74943	33.5637	42.8507
292	83.33927	88.65889	33.72235	43.19463
293	83.47372	88.63396	33.69574	43.01436
294	83.21353	88.63002	33.55838	43.05971
295	83.15999	88.53423	33.78112	43.04064
296	83.33927	88.77961	33.59869	43.33715
297	83.30441	88.47387	33.75428	43.43882
298	83.36168	88.54998	33.69166	43.46691
299	83.43015	88.17863	33.65089	43.37684
300	83.3816	88.74549	33.77432	43.32181
301	83.33802	88.7035	33.89435	43.23406
302	83.59449	88.53817	33.79278	43.51175
303	83.40027	88.51061	34.0984	43.43044
304	83.31063	88.56704	33.80331	43.50892
305	83.31686	88.57753	33.92651	43.6218
306	83.24091	88.34265	34.05243	43.40892
307	83.11268	88.65364	34.02129	43.48675
308	83.47746	88.60115	34.04937	43.68095
309	83.36666	88.50143	34.25795	43.72476
310	83.52352	88.48962	34.06466	43.59461
311	83.26332	88.54866	33.88744	43.55569
312	83.31063	88.57491	34.35409	43.6986

313	83.27577	88.48306	33.99332	43.76045
314	83.14754	88.53292	33.98268	43.53765
315	83.17867	88.54998	34.46518	43.45196
316	83.33678	88.33478	34.09036	43.70105
317	83.44883	88.52636	34.00657	43.82437
318	83.53971	88.58672	34.2267	43.84833
319	83.33429	88.36627	34.30653	43.88416
320	83.60196	88.4883	34.36961	44.00103
321	83.23718	88.52242	34.35647	43.95567
322	82.95706	88.32428	34.20428	43.95091
323	83.41272	88.36496	34.43426	43.97487
324	83.38409	88.36627	34.31876	44.06314
325	83.28075	88.40432	34.32533	43.94034
326	83.33927	88.50274	34.40358	44.03299
327	83.24589	86.75753	34.40176	44.03234
328	83.43762	85.60936	34.20836	44.04536
329	83.36666	85.52013	34.39429	43.98067
330	83.33802	85.27476	34.45136	44.15476
331	83.24465	85.6999	34.60117	44.08556
332	83.19859	85.66448	34.50379	44.15167
333	83.42144	86.08175	34.57785	44.16803
334	83.46874	86.63025	34.5347	44.07435
335	83.26083	86.71947	34.54433	44.24625
336	83.38035	86.71554	34.57615	44.363
337	83.32682	86.79952	34.59664	44.32241
338	83.2683	86.84282	34.64386	44.51711
339	83.60445	86.86906	34.6228	44.28091
340	83.42766	87.38607	34.81225	44.50565
341	83.44509	87.14594	34.82799	44.44779
342	83.38284	87.57765	34.68554	44.4291
343	83.38533	87.42674	34.77522	44.62935
344	83.55838	87.58683	34.67693	44.3831
345	83.52601	87.35589	34.77941	44.56376

346	83.44385	87.44905	34.6861	44.59804
347	83.53473	87.79022	34.6998	44.52201
348	83.56585	87.29684	34.935	44.40642
349	83.47248	87.62095	34.91642	44.65886
350	83.43015	87.53566	34.89423	44.65718
351	83.55963	87.59864	34.74057	44.58386
352	83.13758	87.51335	34.84225	44.47111
353	83.16746	87.99886	34.93001	44.70808
354	83.4314	87.74036	35.15966	44.79171
355	83.43389	87.70099	35.02989	44.79416
356	83.41023	87.64194	34.94417	44.70911
357	83.18116	87.64063	34.97825	44.91993
358	83.48866	87.93062	34.97055	44.71646
359	83.46377	87.70493	35.16656	44.79481
360	83.06662	87.88339	34.92537	44.93926
361	83.45505	87.85714	34.97225	44.93256
362	83.43762	87.75085	34.90035	44.85279
363	83.40276	87.71674	35.012	44.70473
364	83.41646	87.82565	35.09579	44.93062
365	83.38907	87.93194	35.12523	45.01799
366	83.1575	87.85977	34.98505	45.08796
367	83.22598	87.74823	35.0317	44.97263
368	83.37039	87.80203	34.98629	45.05794
369	83.37662	87.98311	35.20857	44.94222
370	83.25959	87.74561	35.38941	45.08757
371	83.41397	87.86108	35.17506	45.13203
372	83.14879	87.64325	35.24187	45.1377
373	83.13883	87.98705	35.09296	45.24027
374	83.25212	87.80465	35.12433	45.17533
375	83.48742	87.86501	35.20937	45.10677
376	83.44634	87.89257	35.28705	45.20484
377	83.15501	87.54353	35.30132	45.05394
378	83.3318	87.58421	35.27867	45.47866

379	83.49115	87.86501	35.22012	45.3145
380	83.24465	87.63932	35.22941	45.4114
381	83.15875	87.63145	35.28003	45.31707
382	83.48119	88.07234	35.36348	45.40856
383	83.51232	87.58946	35.23858	45.66177
384	83.51481	87.58552	35.30471	45.13706
385	83.19112	87.74036	35.24232	45.57337
386	83.34176	87.928	35.51669	45.423
387	83.32931	87.83221	35.47106	45.43369
388	83.38782	87.90044	35.30483	45.39606
389	83.29818	87.99623	35.27493	45.69141
390	83.19112	87.67606	35.40855	45.59361
391	83.46252	87.73773	35.52869	45.34091
392	83.12015	87.75217	35.47796	45.50315
393	83.03923	87.72986	35.43811	45.70894
394	83.21975	87.68918	35.34265	45.59103
395	83.39031	87.9713	35.65212	45.49864
396	83.51356	87.90832	35.40821	45.69309
397	83.08903	87.98049	35.38692	45.74321
398	83.09525	87.38213	35.59052	45.57685
399	83.31063	87.65638	35.42021	45.63716
400	83.36292	87.80203	35.64748	45.73664
401	83.04794	87.76791	35.55576	45.48176
402	83.03674	87.64325	35.38443	45.97799
403	83.09525	87.76266	35.47128	45.78135
404	83.08156	87.58683	35.79299	45.8481
405	83.13509	87.71411	35.63751	45.89514
406	83.34425	87.61439	35.51613	45.9347
407	83.37662	87.49104	35.70625	45.93534
408	83.29569	88.00936	35.66854	45.93624
409	83.02055	87.70624	35.83092	46.11613
410	83.62063	87.68393	35.68496	45.85931
411	83.39903	87.98836	35.70557	46.0008

412	83.46625	87.78891	35.68338	46.01227
413	83.26581	87.60258	35.72052	45.94823
414	83.26955	87.81121	35.61034	45.93483
415	83.37288	87.80334	35.67307	46.07683
416	83.24589	87.73248	35.83364	46.00338
417	83.19734	87.88076	35.73343	46.162
418	83.20606	87.79416	35.58112	46.05235
419	83.1326	87.56715	35.80012	46.23726
420	83.50734	87.62882	35.85674	46.20981
421	83.28947	87.77316	35.76977	46.00042
422	83.0965	87.64325	35.66548	46.11961
423	83.27079	87.57502	35.74011	46.06072
424	83.37786	87.62882	35.90521	45.95995
425	83.15875	87.57765	35.77215	46.28751
426	83.45256	87.18793	35.82266	46.48158
427	83.27826	87.6052	35.92593	46.23172
428	83.32806	87.79809	36.01629	46.27617
429	83.18614	87.53828	35.86784	46.35336
430	83.28822	87.66294	35.88811	46.47191
431	83.38409	87.74167	36.09046	46.3473
432	83.35421	87.48448	35.79639	46.35207
433	83.18863	87.68262	36.03701	46.40568
434	83.5173	87.88339	35.83273	46.39022
435	83.60818	87.54878	36.01912	46.38854
436	83.5036	87.66031	35.66911	46.36844
437	83.20606	87.44511	36.13825	46.56727
438	83.20232	87.68918	36.08752	46.39125
439	83.27079	87.81121	36.0959	46.27115
440	83.34798	87.62095	36.07291	46.63041
441	83.19983	87.52122	35.74226	46.39112
442	83.29569	87.60914	36.17482	46.69742
443	83.57332	87.30996	35.99659	46.76404
444	83.58204	87.5186	36.2893	46.58995

445	83.282	87.50941	36.13927	46.66958
446	83.22349	87.72855	36.01935	46.6661
447	83.3928	87.8742	36.05241	46.61881
448	83.33678	87.0777	36.21015	46.79007
449	83.26706	87.64325	36.10416	46.68002
450	83.36417	87.69312	36.24197	46.50606
451	83.43887	87.54484	35.99376	46.7201
452	83.42642	87.47923	36.10552	46.9246
453	83.35421	87.32177	36.3055	46.73801
454	83.31935	87.32833	36.16508	46.8487
455	83.3679	87.45168	36.30572	46.83336
456	83.32931	87.53959	36.08299	46.9014
457	83.61441	87.56452	36.23665	47.00436
458	83.24465	87.3677	36.3192	46.92266
459	83.25834	87.17349	36.34094	46.8197
460	83.34923	87.47136	36.34037	46.8898
461	83.02927	87.20367	36.3355	47.00539
462	83.33678	87.43987	36.34479	46.91119
463	83.26955	87.2391	36.55394	46.91158
464	83.51232	87.50548	36.49958	46.89032
465	83.37786	87.53303	36.29202	47.04212
466	83.46625	87.53697	36.28942	46.91558
467	83.62437	87.39394	36.47354	47.09972
468	83.40276	87.28109	36.45135	46.99637
469	83.54718	87.18399	36.58644	47.32741
470	83.3069	87.58421	36.37491	47.23347
471	83.56959	87.30733	36.58055	46.87937
472	83.16871	87.19317	36.52178	47.02485
473	83.37662	87.21679	36.52212	47.0233
474	83.37288	87.55665	36.42768	47.20151
475	83.44385	87.32833	36.70126	47.19262
476	83.30565	87.411	36.66819	47.28076
477	83.50485	87.58027	36.51521	47.38501

478	83.37164	87.30733	36.69243	47.26324
479	83.47497	87.33358	36.7179	47.293
480	83.40525	87.38344	36.9138	47.13116
481	83.34798	87.57502	36.56322	47.2318
482	83.3679	87.41887	36.66298	47.19095
483	83.73019	87.24829	36.6811	47.57366
484	83.30316	87.37951	36.70794	47.04714
485	83.33055	87.44511	36.60535	47.38746
486	83.20979	87.35195	36.66049	47.28682
487	83.47372	87.15118	36.66548	47.27638
488	83.3928	87.55796	36.85152	47.29378
489	83.19236	87.37032	36.71587	47.23437
490	83.59449	87.15775	36.91018	47.23579
491	83.46501	87.31652	36.54533	47.35395
492	83.20606	86.92155	36.53707	47.28785
493	83.37786	87.32308	36.96634	47.28566
494	83.51107	87.40312	36.79264	47.57534
495	83.6281	87.32571	36.59595	47.50549
496	83.24963	87.09214	36.87745	47.49248
497	83.41646	87.19974	37.02138	47.34738
498	83.24838	87.06458	36.81404	47.45756
499	83.20855	87.04883	36.84144	47.61812
500	83.09899	87.0134	36.77509	47.52418
501	83.54593	87.2824	37.04153	47.45421
502	83.26581	87.26666	36.95412	47.53062
503	83.3181	86.98847	37.01458	47.39248
504	83.1961	87.10395	36.95332	47.35653
505	83.32059	87.28372	36.94426	47.62572
506	83.53473	86.9596	37.0387	47.63899
507	83.48991	87.0882	36.81121	47.55317
508	83.53348	87.07639	36.80317	47.62314
509	83.63433	87.32308	37.13507	47.79607
510	83.54469	87.21023	36.80023	47.656

511	83.67292	87.20236	37.04187	47.731
512	83.38907	87.16955	36.99952	47.49158
513	83.47621	87.10919	36.99284	47.57791
514	83.79368	87.00553	37.05195	47.73551
515	83.19112	87.00422	37.08354	47.9315
516	83.5036	86.87825	36.9326	47.72211
517	83.23593	87.08426	36.8761	47.75883
518	83.43389	87.21154	36.98945	47.75187
519	83.2322	86.90318	37.21241	47.85367
520	83.26706	87.06458	36.93362	47.88357
521	83.20606	87.35064	36.92264	48.08613
522	83.48991	87.12232	37.07392	48.02222
523	83.49738	87.07114	37.24287	47.72997
524	83.31188	86.84413	37.12963	48.22724
525	83.59075	87.20367	37.04187	47.97364
526	83.38035	86.98322	37.29145	47.75819
527	83.37537	87.18005	36.95785	47.81785
528	83.34425	87.0777	37.24955	47.94632
529	83.07035	87.03571	36.97495	47.96024
530	83.38907	87.26797	37.07573	47.92519
531	82.99814	87.07245	37.05999	47.93511
532	83.54967	87.25091	37.32655	47.89323
533	83.45007	87.21154	37.42133	47.65291
534	83.26955	87.02915	37.10234	48.02222
535	83.52726	87.17349	37.12148	47.98498
536	83.08654	87.13544	37.3509	47.80071
537	83.44011	87.25222	37.13314	48.13871
538	83.40276	87.22467	37.26563	47.90638
539	83.62312	87.09607	37.15715	47.91926
540	83.24589	86.81133	37.38045	47.7779
541	83.33304	87.21942	37.2329	48.18664
542	80.67378	87.04358	37.30571	47.93833
543	79.8272	86.68273	37.19735	47.98459

544	80.309	86.77984	37.18614	47.94039
545	81.06346	86.86513	37.2423	48.16654
546	81.05474	86.80739	37.31149	48.03433
547	81.23651	86.90056	37.20278	47.90045
548	81.14687	87.06196	37.25816	48.13536
549	81.29502	87.1958	37.32383	47.99683
550	81.32988	86.97929	37.39596	48.1427
551	81.56767	87.16037	37.374	47.83138
552	81.8565	86.79296	37.24887	47.99439
553	82.07686	87.14462	37.37071	48.23381
554	81.71333	86.89924	37.45281	48.21474
555	81.97851	87.03965	37.39109	48.20456
556	82.03454	87.08164	37.51214	48.20211
557	82.36072	86.88875	37.34467	48.2253
558	82.22502	86.93205	37.32893	48.26125
559	82.41923	86.84413	37.24321	48.17518
560	82.59975	86.97798	37.37241	48.26048
561	82.32835	86.86906	37.44137	48.22865
562	82.40678	86.88612	37.22203	48.16487
563	82.84003	86.74965	37.32655	48.33174
564	82.69437	87.3034	37.53117	48.1561
565	82.61843	86.90187	37.38532	48.36357
566	82.83505	87.0882	37.34557	48.08253
567	82.90726	86.84676	37.51871	48.39669
568	82.64831	86.99241	37.44873	48.23303
569	82.65702	86.82183	37.47149	48.38612
570	82.86493	86.90187	37.29654	48.28896
571	83.37039	86.67224	37.39551	48.3454
572	82.91598	87.04752	37.46492	48.2887
573	82.83754	87.15775	37.43435	45.33086
574	82.70558	86.76671	37.6136	44.843
575	83.04421	87.0672	37.42518	45.4842
576	83.08903	86.75884	37.55008	45.83354

577	82.93963	86.75753	37.46844	46.17695
578	82.78401	86.71423	37.46934	46.53183
579	82.97325	86.63812	37.44001	46.48699
580	82.75911	86.76803	37.50241	46.79754
581	82.90726	86.66174	37.55144	47.02536
582	82.97574	86.83626	37.67939	46.9264
583	82.89108	86.75622	37.60092	47.31723
584	83.1463	86.65649	37.60375	47.28772
585	82.80642	87.04752	37.57454	47.2836
586	83.37039	86.97666	37.70567	47.48591
587	83.06662	86.85201	37.55291	47.50536
588	83.15875	86.97666	37.70635	47.71373
589	83.14381	86.69454	37.55144	47.76076
590	82.97574	86.76015	37.63908	47.61773
591	83.17991	86.58432	37.61813	47.76128
592	83.27577	86.97273	37.72378	47.82571
593	83.2571	86.84151	37.65471	47.73564
594	83.08654	86.9163	37.599	47.79775
595	83.08654	86.8297	37.70555	47.63616
596	83.10397	86.97929	37.60489	47.72455
597	82.95208	86.87694	37.73364	47.67005
598	83.08156	86.92811	37.71744	47.86166
599	83.15128	86.7221	37.83328	47.92661
600	82.94461	86.93467	37.77519	47.71412
601	83.15377	86.77459	37.70046	47.72417
602	83.20357	86.61319	37.59956	47.89491
603	83.04919	86.54233	37.81007	48.16306
604	83.29196	86.71685	37.75209	48.03279
605	83.15003	86.67092	37.72378	48.1342
606	83.05541	86.99503	37.6991	48.09013
607	82.9969	86.73391	37.7239	48.41112
608	83.33802	86.5502	37.82694	48.19721
609	83.0218	86.46097	37.88945	48.0534

610	83.13136	86.74703	37.80701	48.41705
611	83.2571	86.48459	37.65901	48.44423
612	83.09774	86.49247	37.90587	48.28458
613	83.23344	86.77721	38.82761	48.27968
614	83.34425	86.99635	38.55052	48.3222
615	83.2434	86.90712	38.56117	48.34952
616	83.13509	86.70635	38.54633	48.03678
617	83.16995	86.70373	38.37195	48.2378
618	83.13011	86.72472	38.33254	48.47516
619	83.6169	86.53708	38.31895	48.43831
620	83.21228	86.82183	38.24694	48.5682
621	82.98943	86.46097	38.13415	48.2945
622	83.23344	86.59088	38.22463	48.33664
623	83.16373	86.7759	38.10494	48.36035
624	83.18863	86.78771	38.09565	48.51627
625	83.09027	86.98716	38.07187	48.64216
626	83.18365	86.53314	38.10641	48.46704
627	83.343	86.51346	38.01525	48.35184
628	83.52601	86.63287	37.98978	48.52619
629	83.29071	86.73916	38.20074	48.70672
630	83.21975	86.87694	37.97551	48.44076
631	83.41272	86.63681	37.70034	48.57851
632	83.46874	86.80477	37.88707	48.64216
633	83.21975	86.54102	37.86839	48.70762
634	83.28075	86.54627	37.87575	48.47619
635	83.42144	86.68405	38.02329	48.74744
636	83.15626	86.63025	38.19462	48.77476
637	83.29071	86.54102	38.07368	48.39926
638	83.02304	86.74441	38.04651	48.75298
639	82.91473	86.74965	38.01582	48.62477
640	83.21602	86.73391	38.18466	48.71896
641	83.09774	86.52133	37.86091	48.64564
642	83.13011	86.52921	38.02137	48.89292

643	83.41023	86.74441	37.8762	48.8129
644	83.29943	86.79427	37.7436	48.55299
645	83.17742	86.70242	37.7436	48.70827
646	83.04047	86.32713	37.6529	48.71845
647	83.34425	86.51084	37.88141	48.85195
648	82.86493	86.50952	37.91572	48.62451
649	83.37039	86.76671	38.00008	48.77167
650	82.91598	86.58432	37.85921	48.90401
651	82.83754	86.3665	37.95547	48.93403
652	82.70558	86.55283	37.88141	48.95052
653	83.04421	86.37699	37.85808	49.00928
654	83.08903	86.39668	37.86465	48.80208
655	82.93963	86.57645	37.99091	49.01817
656	82.78401	86.52789	37.94324	49.01779
657	82.97325	86.42686	37.80135	48.73958
658	82.75911	86.60663	37.95399	48.90297
659	82.90726	86.53052	37.97596	48.83829
660	82.97574	86.56332	37.82672	48.97217
661	82.89108	86.54495	38.10562	48.92823
662	83.1463	86.44523	37.91549	48.9446
663	82.80642	86.38487	38.08354	48.99498
664	83.37039	86.40717	37.98026	49.0339
665	83.06662	86.49771	38.08489	48.81754
666	83.15875	86.48853	38.01718	48.9138
667	83.14381	86.37699	38.00846	48.86084
668	82.97574	86.71685	38.12158	48.98905
669	83.17991	86.59613	38.03881	48.95967
670	83.27577	86.46491	38.11275	48.887
671	83.2571	86.46753	38.09758	48.91728
672	83.08654	86.45966	38.34658	49.03016
673	83.08654	86.76409	38.10799	48.89679
674	83.10397	86.42948	38.26845	49.09085
675	82.95208	86.47803	38.11898	49.2987

676	83.08156	86.38618	38.1448	48.86329
677	83.15128	86.41505	38.2543	49.0625
678	82.94461	86.44916	38.04017	48.90297
679	83.15377	86.625	38.25475	49.20257
680	83.20357	86.48984	38.27264	49.31197
681	83.04919	86.58301	38.2714	49.0741
682	83.29196	86.31794	38.05002	49.196
683	83.15003	86.49247	38.16654	49.18582
684	83.05541	86.43867	38.06474	49.09678
685	82.9969	86.43079	38.28351	49.12036
686	83.33802	86.34156	38.31737	49.11276
687	83.0218	86.52265	38.23652	48.97501
688	83.13136	86.40455	38.05126	49.2545
689	83.2571	85.9899	38.09124	49.17641
690	83.09774	86.17229	38.23391	48.97746
691	83.23344	86.37568	38.22338	49.14974
692	83.34425	86.33894	38.24003	49.24316
693	83.2434	86.05813	38.32518	49.16263
694	83.13509	86.33763	38.32733	49.19768
695	83.16995	86.62893	38.45416	49.33014
696	83.13011	86.29301	38.45076	49.28285
697	83.6169	86.40849	38.23856	49.13814
698	83.21228	86.45048	38.25011	49.6108
699	82.98943	86.22478	38.29608	49.13557
700	83.23344	86.26152	38.33617	49.19123
701	83.16373	86.37962	38.22327	49.27963
702	83.18863	86.43342	38.25758	49.27461
703	83.09027	86.35206	38.19972	49.34406
704	83.18365	86.26283	38.40818	49.4054
705	83.343	86.23528	38.4083	49.2085
706	83.52601	86.17885	38.40524	49.48336
707	83.29071	86.46491	38.49289	49.34316
708	83.21975	86.35206	38.20289	49.24999

709	83.41272	86.27727	38.33209	49.09936
710	83.46874	86.356	38.34024	49.39457
711	83.21975	86.24971	38.40048	49.71466
712	83.28075	86.12768	38.43593	49.42898
713	83.42144	86.07388	38.33016	49.52459
714	83.15626	86.10406	38.62062	49.36687
715	83.29071	86.32451	38.56615	49.5215
716	83.02304	86.32057	38.38554	49.49122
717	82.91473	86.19854	38.43208	49.31983
718	83.21602	86.05157	38.40807	49.70835
719	83.09774	86.53839	38.42902	49.42962
720	83.13011	86.26021	38.41849	49.28092
721	83.41023	86.41898	38.41849	49.2094
722	83.29943	86.33763	38.3929	49.32821
723	83.17742	86.28776	38.35009	49.73038
724	83.04047	86.63943	38.43253	49.26494
725	83.34425	86.15786	38.40785	49.36545
726	83.23593	86.3888	38.31635	49.55088
727	83.05417	86.4098	38.48915	49.62936
728	83.26332	86.41111	38.43423	49.49431
729	83.25959	86.03582	38.43751	49.63941
730	83.32184	86.29301	38.42811	49.44083
731	83.10521	86.50296	38.3527	49.65796
732	83.32184	86.35075	38.32609	49.45011
733	83.16871	86.10275	38.46979	49.59959
734	83.26208	86.14867	38.63319	49.48813
735	83.10646	86.48853	38.42211	49.6032
736	83.24216	86.0765	38.67565	49.62253
737	83.42891	86.29301	38.37002	49.60294
738	83.17991	86.42161	38.29653	49.55397
739	82.97823	86.20641	38.4451	49.67136
740	83.2073	86.55939	38.4451	49.63515
741	83.25585	86.0122	38.61518	49.61351

742	83.23967	86.4531	38.58325	49.4715
743	83.40152	86.18541	38.65062	49.6474
744	83.53971	86.00433	38.56853	49.69095
745	83.16497	86.24184	38.57589	49.32061
746	83.31312	86.25365	38.67225	49.75538
747	82.96578	86.06732	38.58506	49.60964
748	83.20606	86.41373	38.59854	49.62485
749	83.24465	86.31794	38.49311	49.45256
750	83.29196	86.1408	38.50206	49.77948
751	83.33429	86.39536	38.52538	49.63322
752	83.37413	86.01483	38.72321	49.70783
753	83.51107	86.44654	38.6735	49.60126
754	83.20357	86.11193	38.64609	49.68696
755	83.18738	86.13949	38.49775	49.80125
756	83.1712	86.22609	38.67486	49.73734
757	83.25087	86.13817	38.74993	49.9287
758	83.33553	86.00696	38.53376	49.52343
759	83.33678	86.16311	38.57226	49.81994
760	83.63433	86.24971	38.61224	49.74365
761	83.21477	86.02139	38.42494	49.67755
762	83.41272	86.31138	38.65561	49.75731
763	83.35047	86.12374	38.55698	49.89274
764	82.9969	86.38224	38.50783	49.88733
765	83.23593	85.84687	38.64202	49.55475
766	83.39778	86.10275	38.55471	49.97431
767	83.47372	86.16311	38.74574	49.73231
768	83.52975	86.22478	38.6889	49.84958
769	83.27702	86.13555	38.76046	49.74224
770	83.40276	86.06732	38.84369	50.01903
771	83.22971	86.18673	38.75831	49.77973
772	82.86991	86.25496	38.65719	49.70512
773	83.24465	86.18673	38.94617	49.90344
774	83.36666	85.95578	38.68584	49.85112

775	82.9857	86.21166	38.78855	49.89996
776	83.20232	86.07781	38.62945	49.90962
777	83.28822	86.32451	38.75571	49.74907
778	83.17493	86.24184	38.59027	49.95898
779	83.2322	86.20247	38.67803	49.89661
780	83.4065	85.8075	38.77779	50.02779
781	83.36915	86.28645	38.72502	50.01374
782	83.221	86.18279	38.82308	49.97599
783	83.27826	86.01614	38.68131	49.9064
784	83.50983	86.16048	38.98671	50.31914
785	83.10646	86.18279	38.87064	49.79223
786	83.55838	85.98596	38.88616	49.98733
787	83.22473	86.17754	38.85887	50.06748
788	83.30939	86.05551	38.90258	49.84416
789	83.34674	85.91904	38.93745	50.14376
790	83.2571	85.97809	39.10629	50.11799
791	83.25212	86.21428	38.98886	49.93063
792	83.32433	86.19329	38.81991	50.21219
793	83.46874	85.9151	38.86136	49.8805
794	83.31312	85.74058	39.01332	49.99222
795	83.42019	86.00564	39.04684	50.12005
796	82.95084	85.76945	38.98037	50.13667
797	83.27577	85.90985	38.91684	49.9966
798	83.55216	85.95841	39.09179	50.1283
799	83.25336	86.03058	39.20911	50.10639
799		86.03845	39.23221	50.1225
799		85.84293	39.11229	50.24556
799		85.9361	39.14082	49.95962
799		86.26152	38.93145	50.1359
799		86.12374	39.30558	50.15703
799		85.92691	39.04944	49.97612
799		85.94791	39.03099	49.8037
799		85.82587	39.19269	50.18976

799		86.09881	39.32642	50.00331
799		85.81931	39.27275	50.10085
799		85.83375	39.26618	50.06696
799		86.30351	39.25553	50.06812
799		86.05682	39.2159	50.09054
799		85.97546	39.10878	50.09454
799		86.03976	39.16302	50.13423
799		85.85868	39.21024	50.1542
799		86.26152	39.21817	50.1877
799		85.79832	39.16902	50.05356
799		85.70253	39.15487	50.06838
799		85.92429	39.21794	49.96632
799		86.12374	39.14841	50.24221
799		86.13161	39.14592	50.09853
799			39.48325	50.22662
799			39.34318	50.24401
799			39.33061	50.0707
799			39.23277	50.21064
799			39.1107	50.1618
799			39.38417	50.34736
799			39.20763	50.11013
799			39.25191	50.28808
799			39.21171	50.24569
799			39.15022	50.18616
799			39.44271	50.44272
799			39.30536	50.25767
799			39.28373	50.42596
799			39.2818	50.03307
799			39.221	50.24891
799			39.43433	50.37107
799			39.33955	50.26566
799			39.39527	50.19788
799			39.44181	49.94016

799			39.25689	50.65765
799			39.27943	50.30548
799			39.58777	50.11361
799			39.292	50.18023
799			39.37058	50.33319
799			39.47465	50.47635
799			39.37953	50.38537
799			39.32857	50.16026
799			39.31374	50.29131
799			39.16483	50.31218
799			39.40138	50.29685
799			39.37692	50.3779
799			39.43535	50.27198
799			39.43694	50.39839
799			39.28973	50.48408
799			39.44566	50.21193
799			39.33582	50.49323
799			39.28079	50.51797
799			39.40048	50.07907
799			39.49446	50.34594
799			39.59638	50.30664
799			39.43399	50.4114
799			39.40319	50.29169
799			39.15883	50.45676
799			39.17899	50.48112
799			39.38496	50.38537
799			39.57633	50.50392
799			39.51632	50.36179
799			39.33865	50.54967
799			39.36934	50.58214
799			39.53047	50.52957
799			39.2895	50.36939
799			39.67168	50.66861

799			39.42754	50.66126
799			39.46479	50.80056
799			39.40602	50.75494
799			39.49231	50.34349
799			39.28622	50.79553
799			39.46661	50.5016
799			39.64439	50.72324
799			39.4965	50.53318
799			39.54417	50.52867
799			39.33276	50.34633
799			39.32959	50.33821
799			39.60804	50.43718
799			39.72275	50.5239
799			39.51768	50.44697
799			39.56603	50.30793
799			39.63759	50.61114
799			39.51292	50.57918
799			39.69387	50.36205
799			39.57452	50.48382
799			39.42686	50.46063
799			39.59309	50.44233
799			39.69489	50.52493
799			39.65707	50.45534
799			39.60804	50.47132
799			39.71063	50.74025
799			39.73418	50.51153
799			39.78288	50.6708
799			39.41712	50.63356
799			39.87437	50.77955
799			39.62865	50.58794
799			39.62242	50.45857
799			39.59287	50.55792
799			39.59071	50.7101

799			39.69999	50.51617
799			39.47125	50.53988
799			39.69953	50.60379
799			39.66794	50.88522
799			39.61834	50.58008
799			39.61449	50.7293
799			39.77325	50.67879
799			39.62049	50.65894
799			39.72026	50.59992
799			39.60849	50.54194
799			39.81413	50.64799
799			39.90257	50.67814
799			39.79963	50.69812
799			39.84923	50.47893
799			39.64937	50.57183
799			39.8515	50.64941
799			39.77665	50.70082
799			39.7335	50.72105
799			39.89419	50.736
799			39.74539	50.74566
799			39.50681	50.58807
799			39.69919	50.66706
799			39.71765	50.55972
799			39.8156	50.80378
799			39.75015	50.7253
799			39.62933	50.58072
799			39.64518	50.54915
799			39.69863	50.71126
799			39.77484	50.59954
799			39.84572	50.50727
799			39.985	50.59709
799			39.79828	50.4873
799			39.93563	50.50431

799			40.05294	50.70043
799			39.99055	50.46166
799			39.87698	50.87362
799			39.99621	50.62325
799			39.91106	50.97671
799			39.87188	50.93612
799			39.97187	50.85507
799			39.85082	50.89282
799			39.96326	50.59245
799			39.96994	50.82027
799			40.1621	50.61848
799			39.66522	
799			39.92136	
799			39.7181	
799			39.91446	
799			39.87641	
799			40.01603	
799			39.88807	
799			39.85591	
799			39.90891	
799			39.96247	
799			40.05498	
799			40.0286	
799			39.95692	
799			39.90257	
799			39.70078	
799			39.91038	
799			40.00776	
799			39.89453	
799			39.99214	
799			40.22087	
799			40.14874	
799			40.03279	

799			40.19947	
799			40.14625	
799			40.04819	
799			40.03052	
799			40.03585	
799			39.98285	
799			40.17784	
799			40.1706	
799			40.08827	
799			40.11205	
799			40.09258	
799			40.07174	
799			39.99384	
799			39.94696	
799			40.29108	
799			40.26764	
799			40.06891	
799			39.99304	
799			40.06642	
799			40.27829	
799			40.33026	
799			39.97062	
799			39.12724	
799			39.00347	
799			39.24829	
799			39.23413	
799			39.26754	
799			39.30298	
799			39.56807	
799			39.34703	
799			39.62842	
799			39.6796	
799			39.6188	

799			39.74392	
799			39.89826	
799			39.79329	
799			39.73033	
799			39.90211	
799			39.85591	
799			39.92272	
799			39.81243	
799			39.97776	
799			39.81277	

Table Apx. 2. 5: Time course of percent vesicle fusion of all constructs at pH 6.3 in lipid:protein 100:1.

Time (s)	FPHM	G10V	L9R	V2E
1	16.19796	0.22285	0.33243	2.07704
2	26.41263	26.11787	0.77983	5.40769
3	32.91152	35.77609	0.99127	6.54047
4	38.34712	39.95416	1.36996	7.61329
5	43.53918	43.53556	1.74743	8.63811
6	47.6483	47.04152	2.0144	9.12499
7	51.24197	49.88515	2.33756	9.60895
8	54.35787	52.47277	2.61783	10.13634
9	57.20071	54.71799	2.85852	10.73618
10	59.49501	56.84538	3.18674	11.03485
11	61.2849	58.46529	3.341	11.57083
12	62.73544	59.8569	3.60731	11.24077
13	64.20264	61.5264	4.06505	11.79097
14	65.1406	62.83372	4.239	12.15263
15	66.22951	63.89968	4.51543	11.92304
16	67.13692	64.78683	4.81055	12.54058
17	67.98195	65.89191	4.96668	12.30425
18	68.41836	66.8049	5.00176	12.79016

19	69.43467	67.08898	5.44564	12.83545
20	69.91911	68.22585	5.64642	13.09871
21	70.17275	68.4857	6.00575	13.16746
22	70.79481	69.19146	6.03775	13.30289
23	71.06477	69.33373	6.26679	13.61612
24	71.72289	70.09874	6.52331	14.10181
25	71.86614	70.60192	6.73849	14.1976
26	72.42019	70.91754	6.88275	14.07118
27	72.58389	71.64379	6.83481	14.30251
28	73.05844	71.50501	7.23647	14.34379
29	73.272	72.27247	7.49575	14.62193
30	73.44707	72.62675	7.58228	14.79527
31	73.45488	72.81757	7.94667	14.92288
32	73.5485	72.86565	7.92292	15.19722
33	73.21306	73.37628	8.2099	15.32125
34	73.39376	73.35987	8.37681	15.55812
35	73.72139	73.74336	8.54208	15.68498
36	74.04396	74.15923	8.77903	15.94509
37	74.18009	74.27483	8.74109	15.76665
38	74.50554	74.33398	8.99938	16.18316
39	74.57331	74.65926	9.363	16.35671
40	75.07417	74.6737	9.37707	16.34922
41	75.39812	74.81527	9.47922	16.60357
42	75.15114	75.0416	9.70133	16.74303
43	75.38319	75.19597	9.87209	16.99109
44	75.38778	75.29074	9.99381	16.99261
45	75.33035	75.70823	10.11849	17.12435
46	75.58078	75.52894	10.31136	17.19407
47	75.90473	75.78752	10.45133	17.48242
48	75.73012	75.78577	10.77668	17.58593
49	75.95872	76.32411	10.83496	17.59505
50	75.91966	76.21584	11.08796	17.78348
51	76.1138	76.2595	11.16394	18.03556

52	76.21604	76.3467	11.30293	17.98843
53	76.42052	76.51982	11.42772	18.19673
54	76.3493	76.46929	11.63609	18.34227
55	76.26084	76.59107	11.81971	18.5673
56	76.52621	77.00856	12.00532	18.52408
57	76.67899	76.58338	12.01895	18.82405
58	76.8582	76.68002	12.23402	18.66863
59	76.54918	77.08098	12.50935	18.88085
60	76.7215	77.0514	12.48956	18.95199
61	76.82833	76.99098	12.68352	19.32277
62	77.08565	77.09949	12.8159	19.3584
63	77.14654	76.98469	13.14675	19.38435
64	77.31541	77.20648	13.14269	19.4745
65	77.01558	77.23954	13.29662	19.63773
66	77.05004	77.34921	13.39195	19.64447
67	77.21202	77.37622	13.5681	19.71137
68	77.07187	77.34619	13.75216	19.85245
69	77.24418	77.46703	13.97636	20.07303
70	7.75E+01	77.70361	14.18725	20.08259
71	7.75E+01	77.41825	14.16383	20.42296
72	7.75E+01	77.44468	14.31216	20.41113
73	77.5084	78.14415	14.53493	20.45272
74	77.64051	77.72992	14.64533	20.52592
75	77.43373	77.43688	14.78816	20.58207
76	77.6899	78.04321	14.877	20.72837
77	77.56354	77.60046	14.98959	20.80016
78	77.74275	77.86765	15.08152	20.96133
79	77.65084	77.83866	15.44744	21.02595
80	78.05866	77.98209	15.53365	21.05375
81	77.78525	77.96858	15.60534	21.24078
82	77.56009	78.12319	15.80557	21.26793
83	77.68071	77.81025	15.91156	21.4064
84	77.85532	78.24532	16.13499	21.49318

85	78.02534	78.03879	16.15456	21.51729
86	78.09886	78.15463	16.35204	21.83736
87	77.94837	78.21808	16.25748	21.501
88	77.91046	78.12634	16.73083	21.78816
89	78.015	78.26733	16.74458	21.80999
90	78.1563	78.21389	16.77515	22.08574
91	78.25394	78.29434	16.94777	22.02025
92	78.24246	78.2296	16.91622	22.10268
93	78.19995	78.25568	17.31359	22.22834
94	78.12299	78.64558	17.48424	22.37996
95	78.04602	78.20027	17.56099	22.18772
96	78.21259	78.39516	17.64236	22.47466
97	78.2011	78.31634	17.74627	22.6644
98	78.32747	78.49365	17.74692	22.5597
99	78.39639	78.57375	17.78728	22.51941
100	78.4814	78.55431	18.11758	22.7388
101	78.47106	78.78983	18.20895	22.98631
102	78.293	78.47817	18.33738	23.01107
103	78.40673	78.68144	18.47274	23.08851
104	78.45383	78.65117	18.46361	23.08601
105	78.51471	78.60938	18.60897	23.18843
106	78.52735	78.80508	18.66735	23.14575
107	78.51242	78.70217	18.83877	23.37339
108	78.60432	78.67085	18.87605	23.32136
109	78.432	78.67446	18.94972	23.73223
110	78.67554	78.62917	19.26188	23.52468
111	78.37686	78.67923	19.11729	23.46559
112	78.77433	78.66712	19.43374	23.63654
113	78.54228	79.04352	19.43363	23.55226
114	78.81914	79.00859	19.46453	23.78675
115	78.59168	78.97483	19.53039	23.61287
116	78.8019	78.85142	19.67938	23.89763
117	78.77204	78.73348	19.86036	24.19153

118	78.849	78.78611	20.00121	24.14146
119	78.72379	78.6358	20.19803	23.96182
120	78.96733	78.92011	20.17483	24.28558
121	78.73642	78.87703	20.19155	24.32109
122	78.76629	78.83978	20.12656	24.34629
123	79.12471	78.79472	20.4451	24.18316
124	79.14194	78.88402	20.46148	24.47999
125	78.95814	78.91662	20.74264	24.43394
126	78.91218	78.83512	20.74528	24.62172
127	78.92023	79.09009	20.72164	24.59935
128	79.23269	78.98181	20.85303	24.71002
129	78.94435	79.09474	20.72526	24.75585
130	79.20052	79.11919	21.11428	24.93462
131	79.06497	79.04934	20.91076	24.99316
132	79.09828	79.04934	21.07371	24.84958
133	79.12471	79.06913	21.0979	25.14901
134	7.92E+01	79.12734	21.33727	25.16475
135	7.94E+01	79.41258	21.57214	25.13293
136	7.94E+01	78.87005	21.38862	25.24132
137	7.90E+01	79.10522	21.69473	25.20027
138	7.91E+01	79.26821	21.70166	25.58572
139	7.93E+01	79.31944	21.70309	25.35058
140	7.92E+01	79.33108	21.88803	25.44214
141	7.95E+01	79.39977	21.80436	25.43855
142	7.91E+01	79.27869	21.94697	25.52555
143	7.91E+01	79.31828	22.11212	25.51023
144	7.94E+01	79.04701	22.16787	25.56302
145	7.95E+01	79.44634	22.33324	25.70312
146	7.95E+01	79.26589	22.22087	25.77741
147	7.93E+01	79.18672	22.29839	25.76481
148	7.92E+01	79.37299	22.48124	25.84876
149	7.91E+01	79.37299	22.57712	26.11452
150	7.96E+01	79.27636	22.63408	25.96334

151	7.93E+01	79.48942	22.71017	25.88069
152	7.94E+01	79.19021	22.95745	26.09563
153	79.70598	79.31828	23.24575	26.02666
154	79.46819	79.5127	23.65907	26.01493
155	79.53711	79.3404	23.41453	26.11615
156	79.63016	79.60118	23.58057	26.18056
157	79.6382	79.40326	23.40816	26.54309
158	79.66807	78.97134	23.53241	26.46826
159	79.459	79.20767	23.77442	26.18642
160	79.55434	79.4964	23.77969	26.32555
161	79.52333	79.33574	24.17146	26.4196
162	79.58881	79.83752	23.96189	26.43568
163	79.52792	79.62563	24.09427	26.53864
164	79.6405	79.45682	24.04424	26.64876
165	79.56583	79.37998	24.37807	26.87564
166	79.71402	79.43586	24.16519	26.86218
167	79.83119	79.27869	24.332	26.81852
168	79.90357	79.51969	24.38049	26.74694
169	79.55664	79.52784	24.40578	26.90497
170	79.60719	79.65241	24.61865	26.90942
171	79.79328	79.25424	24.64603	26.97263
172	79.52333	79.45333	24.64438	26.96177
173	79.78524	79.81075	24.83922	26.94157
174	80.01729	80.02962	25.0279	27.33994
175	79.6899	79.62098	24.93037	27.30171
176	79.76571	79.52085	24.96577	27.24806
177	79.94377	79.3532	25.2488	27.33266
178	79.88863	79.71062	24.96698	27.38349
179	79.78524	79.32643	25.24561	27.3987
180	79.91735	79.62214	25.17381	27.59799
181	79.81281	79.8026	25.39845	27.51349
182	79.88059	79.55461	25.47937	27.65349
183	79.93458	80.03428	25.68554	27.67836

184	79.82545	79.56859	25.72732	27.84399
185	79.75538	79.55811	25.65464	27.69313
186	79.81396	79.58256	25.73348	27.6776
187	79.69794	80.31835	25.76119	27.75971
188	79.78409	79.46846	25.958	27.8618
189	79.86795	79.90505	25.99253	27.89036
190	80.04601	79.7665	26.01111	27.94075
191	79.9633	79.87478	26.15779	27.94705
192	80.24934	79.63727	26.12953	28.07239
193	79.69219	79.83054	26.17461	27.92522
194	80.23556	79.69316	26.27006	28.03622
195	79.91965	79.69665	26.06851	28.01178
196	80.09081	79.71644	26.23619	28.03014
197	80.1046	79.58605	26.3302	28.36693
198	80.1069	79.83636	26.41289	28.19457
199	79.90816	79.63727	26.40816	28.26821
200	80.00581	79.64659	26.48623	28.37833
201	80.1046	79.67453	26.67161	28.39213
202	80.07014	79.44401	26.72758	28.30383
203	80.5641	79.51969	26.64819	28.38713
204	80.01729	80.1344	26.77915	28.4827
205	79.88633	79.63378	26.91428	28.52115
206	80.23211	79.34156	26.97135	28.49747
207	80.05061	79.82472	26.86084	28.58469
208	80.08852	79.85848	27.17377	28.68515
209	80.15859	79.83519	27.07943	28.71121
210	80.07358	79.74904	27.39104	28.61857
211	80.37341	79.98305	27.28296	28.67863
212	80.13447	79.83519	27.32749	28.83437
213	80.23441	79.77233	27.20247	28.9281
214	80.24819	79.64193	27.22974	28.80364
215	80.20454	79.55345	27.43678	28.90236
216	80.02419	79.71877	27.57983	28.97991

217	79.94722	79.7048	27.71761	28.95167
218	80.25049	79.88642	27.74521	28.78398
219	80.21029	79.95395	27.70188	29.0681
220	80.31712	79.50688	27.56532	29.1464
221	80.07473	79.87478	27.68473	29.08569
222	80.06669	79.71761	27.84812	29.3016
223	80.15859	79.53948	27.92828	29.19614
224	80.18157	79.61166	27.94752	29.12327
225	80.32746	79.48942	28.05011	29.20451
226	80.04371	79.43237	27.8655	29.31865
227	80.1046	79.37416	28.14819	29.2107
228	80.06095	79.58256	28.1704	29.45322
229	79.9656	79.75719	28.11234	29.44475
230	80.31253	79.4801	28.37898	29.54391
231	80.17697	79.5127	28.21119	29.17855
232	80.154	79.79212	28.37041	29.4379
233	80.1471	79.77582	28.41109	29.65849
234	80.24015	79.70364	28.46992	29.68444
235	80.25049	79.71179	28.47684	29.7533
236	80.23556	79.65474	28.5979	29.73799
237	80.20339	79.66871	28.73766	30.09487
238	80.06669	79.40559	28.726	30.29536
239	79.9633	79.51852	28.6144	30.29308
240	80.04257	79.84334	28.68356	30.52973
241	79.87829	79.7211	28.93634	30.35477
242	80.22752	79.65125	28.8132	30.48119
243	79.86221	79.5453	28.94492	30.52669
244	80.04716	79.74904	28.98461	30.52615
245	80.03567	79.65008	28.92612	30.42981
246	79.89438	79.53832	29.12602	30.71893
247	80.26772	79.58256	29.19408	30.59023
248	79.8691	79.61748	29.35736	30.68884
249	80.07243	79.72808	29.35285	30.73576

250	80.02993	79.36717	29.26819	30.61977
251	80.18272	79.61865	29.18715	30.67461
252	80.20569	79.61283	29.3004	30.82069
253	80.21258	79.41025	29.51416	30.83861
254	80.16204	79.35553	29.39903	30.75911
255	80.34354	79.75137	29.50173	30.82123
256	80.17697	79.46031	29.38474	30.88173
257	80.2884	79.76301	29.5389	30.92463
258	80.37111	79.74322	29.66325	30.83372
259	80.24245	79.61166	29.80378	30.8713
260	80.45267	79.82821	29.65974	31.00739
261	80.3401	79.36135	29.7565	31.01488
262	80.93286	79.88409	29.94232	31.15672
263	80.71	79.5162	29.86106	31.09145
264	80.01844	79.53715	29.8482	31.04909
265	80.42855	79.71179	29.8968	31.32745
266	80.48139	79.6105	30.12319	31.28553
267	80.39179	79.36485	29.86623	31.0782
268	80.38375	79.69432	30.08284	31.02715
269	80.36652	79.65125	30.07338	31.35536
270	80.51241	79.36717	30.10912	31.30845
271	80.31023	79.88758	30.1939	31.33451
272	80.5216	79.38464	30.13298	31.32984
273	80.49288	79.56742	30.34541	31.23948
274	80.48369	79.43237	30.13848	31.41423
275	80.09886	79.68384	30.24502	31.43172
276	80.40557	79.55461	30.31715	31.48754
277	80.39753	79.57324	30.31715	31.42585
278	80.78811	79.59886	30.39544	31.38458
279	80.55836	79.49175	30.48461	31.32224
280	80.68702	79.43703	30.50705	31.44497
281	80.51586	79.33225	30.66428	31.63166
282	80.41362	79.44401	30.47373	31.47853

283	80.35618	79.53482	30.74675	31.50579
284	80.95353	79.5453	30.71662	31.61852
285	80.50896	79.68501	30.65197	31.66935
286	80.57329	79.35437	30.70123	31.61971
287	80.45957	79.55811	30.96259	31.7356
288	80.50322	79.49757	31.01548	31.58235
289	80.62614	79.46613	30.86231	31.66479
290	80.38375	79.29848	31.13906	31.65317
291	80.17582	79.58838	30.88386	31.78654
292	80.58708	79.70364	30.97226	31.82346
293	80.66864	79.71644	30.90145	31.60082
294	80.70655	79.75253	31.01713	31.81836
295	80.53653	79.31828	30.89255	31.8403
296	80.41132	79.94347	31.1538	31.83334
297	80.63648	79.50805	30.828	31.81466
298	80.53998	79.75952	31.32412	31.76329
299	80.33895	79.70014	31.32566	31.70921
300	80.50896	79.5453	31.25034	31.79598
301	80.67324	79.68035	31.30235	32.05621
302	80.4297	79.72576	31.48872	31.88678
303	80.42625	79.6396	31.37239	31.99452
304	80.54343	79.4638	31.45727	31.71942
305	80.56066	79.66754	31.59439	32.02829
306	80.48829	79.58372	31.36238	32.04763
307	80.68702	79.58838	31.47816	32.08444
308	80.44119	79.59187	31.62286	32.13386
309	80.65486	79.70713	31.41153	32.19262
310	80.58019	79.46031	31.46024	32.1546
311	80.5641	79.78979	31.63001	32.13582
312	80.42281	79.5127	31.78472	32.20543
313	80.60201	79.50455	31.74239	32.24888
314	80.46646	79.53482	31.84255	32.10378
315	80.59053	79.39628	31.70676	32.2845

316	80.73527	79.74322	31.76987	32.35379
317	80.61235	79.50921	31.91732	32.24953
318	80.40443	79.67569	31.88994	32.16699
319	80.7054	79.52202	31.77691	32.30568
320	80.52275	79.53832	31.80583	32.36682
321	80.46761	79.58023	32.06752	32.34011
322	80.66634	79.5127	32.11788	32.43373
323	80.36307	79.29383	32.19485	32.50095
324	80.6135	79.49175	32.21321	32.21325
325	80.57674	79.84451	31.92546	32.29862
326	80.656	79.75021	32.19914	32.49292
327	80.79156	79.71528	32.13327	32.47608
328	80.7571	79.65474	32.28424	32.43297
329	80.83981	79.49873	32.34955	32.31784
330	80.4745	79.3532	32.46072	32.59229
331	80.72953	79.70596	32.1082	32.39137
332	80.91218	79.42422	32.10645	32.49194
333	80.6606	79.43121	32.30722	32.54613
334	80.81339	79.5942	32.42311	32.59349
335	80.64337	79.7374	32.40695	32.68787
336	80.42281	79.7374	32.27193	32.70709
337	80.7502	79.68501	32.51899	32.78073
338	80.82143	79.59886	32.50591	32.74358
339	80.65371	79.85382	32.35032	32.85208
340	80.79845	79.71761	32.58288	32.81494
341	80.80764	79.76301	32.5422	32.82417
342	80.85129	79.37532	32.60608	32.6933
343	80.73527	79.68268	32.53912	32.81809
344	80.72148	79.64426	32.91648	32.83883
345	81.00982	79.45566	32.71383	32.94928
346	80.82258	79.55229	32.68173	32.98458
347	80.8467	79.76767	32.78465	32.93245
348	80.60546	79.56975	32.7411	32.79376

349	80.81109	79.65241	32.7764	32.98545
350	80.70885	79.93415	32.95485	32.96362
351	80.73182	79.48942	32.78695	32.90465
352	80.52964	79.47661	32.96904	32.92561
353	80.78926	79.75021	32.81488	33.13044
354	80.85819	79.69316	33.01148	32.97459
355	80.72953	79.43004	33.20456	32.90475
356	81.04084	79.60351	32.99906	33.09829
357	80.83751	79.93183	33.21655	33.21038
358	80.78352	79.9132	33.16047	33.01293
359	80.50092	79.8026	33.16971	33.21809
360	80.63073	79.54181	33.03171	33.23242
361	80.90529	79.50805	33.17235	33.30139
362	80.8961	79.82937	33.13969	33.22232
363	80.78696	79.68152	33.18851	33.1362
364	80.52505	79.59769	33.17839	33.14043
365	80.85359	79.60002	33.23931	33.17247
366	80.58019	79.60351	33.48704	33.47168
367	80.42855	79.78513	33.20874	33.24437
368	80.82487	79.63611	33.36938	33.32061
369	80.94205	79.69432	33.29901	33.31942
370	80.76973	79.81191	33.49176	33.30117
371	80.81224	79.99935	33.54685	33.48352
372	80.64452	79.87711	33.65801	33.36308
373	80.72034	79.58372	33.6225	33.33126
374	80.55377	79.86779	33.51002	33.44279
375	80.53883	79.8154	33.58742	33.43758
376	80.76399	79.85964	33.6634	33.46821
377	80.75939	79.48127	33.50254	33.40771
378	80.86967	79.82704	33.71057	33.559
379	80.67439	79.70131	33.62162	33.52979
380	80.35043	79.66405	33.53629	33.352
381	80.60661	79.72692	33.51386	33.49503

382	80.72263	79.99004	33.84472	33.59962
383	80.72723	79.74671	33.65571	33.58529
384	81.03624	79.79328	33.5485	33.42553
385	80.93286	79.69665	33.73751	33.64513
386	80.82258	79.81657	33.90662	33.54684
387	80.71459	79.66405	33.70079	33.77296
388	80.74331	79.71761	33.6667	33.78806
389	80.68587	79.67104	33.77644	33.85876
390	80.91792	79.76767	33.68858	33.65013
391	80.57674	79.86779	33.98656	33.62993
392	80.83866	79.87827	33.99316	33.71181
393	80.73757	80.01798	33.81448	33.84899
394	80.95583	79.8969	34.03285	33.84203
395	80.85129	79.97024	34.07584	33.86321
396	80.88231	79.63727	34.11554	33.88504
397	80.92137	79.86663	34.1417	33.81999
398	81.03854	79.65823	34.06144	33.86875
399	80.86738	79.86314	34.03527	33.98583
400	80.79156	79.76534	34.14434	33.96987
401	80.73182	79.7863	34.21999	33.92121
402	80.76054	79.7991	33.98788	33.82857
403	80.66405	79.84334	34.17436	33.87386
404	80.67553	80.14488	34.24033	33.9577
405	80.66979	80.01099	34.23066	33.94402
406	80.75824	79.85382	34.31642	34.14472
407	80.71574	79.81307	34.32357	34.10932
408	80.63188	79.82239	34.16029	34.07402
409	80.94664	79.72459	34.35293	34.14939
410	80.81913	79.54763	34.43429	34.04556
411	80.90988	79.94463	34.51467	34.27842
412	80.93975	79.6722	34.60934	34.17448
413	80.71804	79.66871	34.39449	34.19121
414	80.58593	79.78979	34.44034	34.11768

415	80.76858	79.59653	34.45255	34.07532
416	80.66634	79.83752	34.56239	34.4245
417	80.68932	79.73391	34.47256	34.2113
418	80.77203	80.21939	34.8718	34.28417
419	80.8019	79.93881	34.49059	34.39658
420	81.08334	79.84218	34.72479	34.3589
421	80.72263	79.98654	34.72644	34.28819
422	80.99374	79.92833	34.63815	34.39952
423	80.96502	79.91669	34.72413	34.39007
424	80.79041	79.848	34.82529	34.41342
425	80.95698	79.7537	34.81243	34.31339
426	80.63648	79.80842	34.75811	34.38084
427	80.86967	79.69199	34.94888	34.58969
428	80.8444	79.84916	34.88984	34.48727
429	80.87312	79.70829	34.81892	34.61011
430	80.86508	80.02031	34.75239	34.53897
431	80.91562	79.90039	34.7768	34.74521
432	80.86508	80.01798	34.98341	34.61695
433	80.93056	79.69316	35.01782	34.44709
434	80.84555	79.85731	34.96625	34.90367
435	80.69162	79.96675	35.08962	34.63454
436	80.83981	79.83287	34.98088	34.7211
437	80.7525	80.0238	34.95185	35.90916
438	80.87197	79.94463	35.07995	35.13185
439	80.7525	80.21939	35.08863	34.55569
440	80.62843	80.01798	35.16472	34.75944
441	80.83981	80.05407	35.11293	34.63791
442	79.99547	80.02263	35.08588	34.84633
443	79.37858	80.24035	35.1203	34.52963
444	79.737	79.81191	35.14449	34.77758
445	79.5509	79.81889	35.2495	34.88249
446	79.89438	79.78397	35.22982	34.80299
447	80.09081	79.86896	35.36407	34.78974

448	80.18961	80.14954	35.22982	34.99284
449	80.17467	79.95162	35.25368	34.72838
450	80.22407	79.47894	35.26313	34.9205
451	80.37915	80.1181	35.45456	34.74923
452	80.31597	80.08783	35.56199	34.96938
453	80.43544	79.81657	35.28996	34.86696
454	80.32172	79.86314	35.28952	34.92604
455	80.23096	79.926	35.42356	35.10839
456	80.40557	79.96093	35.54407	34.99631
457	80.57904	80.11577	35.5312	34.99794
458	80.58593	80.03893	35.50184	35.18301
459	80.57329	79.77582	35.48722	35.02292
460	80.57789	79.93183	35.56342	34.99816
461	80.46416	79.94347	35.71614	35.23003
462	80.43659	79.95045	35.47622	35.04356
463	80.46416	79.95045	35.69272	35.17215
464	80.64452	80.12742	35.70691	35.02205
465	80.80994	80.04243	35.62411	35.1059
466	80.88461	79.90272	35.53197	35.12762
467	80.35503	79.98305	35.68393	35.26142
468	80.6583	79.71644	35.66952	35.28771
469	80.65371	79.8154	35.7499	35.26229
470	80.8019	79.89573	35.91109	35.39273
471	80.64911	79.76767	35.73605	35.27565
472	80.82947	79.82821	35.76441	35.43628
473	80.62843	80.02962	35.71285	35.35884
474	80.67209	79.95627	35.74462	35.26153
475	80.64222	79.83985	35.96288	35.57649
476	80.53653	80.04243	35.85876	35.73723
477	80.77203	79.93183	35.97487	35.4037
478	80.3803	79.80027	35.8471	35.3987
479	80.52045	79.79095	35.94144	35.49601
480	80.66175	79.87361	35.92286	35.58388

481	80.41476	80.01099	35.97311	35.48352
482	80.28725	79.86779	36.0073	35.44182
483	80.59397	80.17748	36.20566	35.40196
484	80.0127	79.68734	36.23425	35.61374
485	80.46876	79.89806	36.09494	35.61353
486	80.52964	79.53366	36.24767	35.51317
487	80.58363	79.86896	36.21347	35.58887
488	80.53424	79.75021	36.02589	35.66718
489	80.52505	79.82239	36.05338	35.75428
490	80.72723	79.84334	36.13595	35.58551
491	80.59972	79.93183	36.26251	35.60973
492	80.44923	79.73507	36.05634	35.67337
493	80.49403	79.7863	36.39698	35.67761
494	80.45957	80.17166	36.19302	35.53761
495	80.71344	80.02147	36.17762	35.71497
496	80.56066	80.28109	36.38643	35.77568
497	80.62154	79.75137	36.27823	35.84258
498	80.95124	79.90854	36.45922	35.68075
499	80.69966	80.06688	36.54762	35.80706
500	80.62614	79.91902	36.38423	35.70573
501	80.78237	79.72226	36.17828	35.58507
502	80.71344	79.82704	36.46911	35.93359
503	80.63877	79.74089	36.46538	35.834
504	80.58478	80.05523	36.35729	35.75168
505	80.51586	79.83869	36.55202	35.88939
506	80.57904	79.96908	36.3828	35.89916
507	80.63303	79.98538	36.4645	35.89612
508	80.61235	79.926	36.59732	35.82477
509	80.43085	79.76185	36.55268	35.82737
510	80.69851	80.01681	36.6755	36.04242
511	80.81339	80.00634	36.39116	36.01983
512	80.59282	79.64077	36.65549	36.0624
513	80.62039	80.1507	36.6059	36.10411

514	80.66405	79.83519	36.59193	36.04242
515	80.60776	79.66289	36.54663	35.95358
516	80.42051	80.02031	36.75917	36.01081
517	80.82947	79.85149	36.85055	35.97573
518	80.42166	80.04359	36.78259	35.97247
519	80.42625	79.79677	36.75071	36.18306
520	80.47105	79.85382	36.81998	36.09553
521	80.80879	79.88758	36.85066	36.14538
522	80.76514	79.89573	36.81008	36.05599
523	80.72493	80.16351	36.68781	36.33663
524	80.40328	80.01681	36.88749	36.2062
525	80.58823	79.91902	37.06067	36.10791
526	80.44234	79.65474	36.94258	36.79821
527	80.74905	79.88176	36.7827	36.1356
528	80.59972	80.42779	36.86418	36.08456
529	80.53998	80.10995	37.02383	36.24953
530	80.63188	79.82704	36.96226	36.27017
531	80.63992	79.8317	36.90728	36.26224
532	80.41362	79.98887	37.10784	36.36487
533	80.35158	79.90156	36.9472	36.20783
534	80.61924	79.81657	37.31829	36.33403
535	80.60891	79.96442	36.8975	36.44361
536	80.69047	79.80725	37.0787	36.40723
537	80.67324	79.76418	37.02493	36.76683
538	80.39179	79.83287	37.12972	36.15754
539	80.50207	80.0238	37.28597	36.1696
540	80.45267	79.86896	37.15094	36.23628
541	80.79156	79.63378	37.20361	36.29069
542	80.44234	80.03078	37.27981	36.43688
543	80.45497	80.09598	37.38141	36.46479
544	80.51356	79.90388	37.22384	36.56384
545	80.63418	79.71179	37.11521	36.50671
546	80.69391	79.89457	37.24429	36.68114

547	80.74791	79.98072	37.32709	36.43188
548	80.5641	79.9621	37.41296	36.4801
549	80.69162	79.83752	37.33171	36.7274
550	80.77203	80.0075	37.6011	36.65149
551	80.48369	80.03777	37.5095	36.60468
552	80.77318	79.95395	37.21076	36.46425
553	80.49288	79.9423	37.56745	36.60652
554	80.58134	80.18679	37.52974	36.62401
555	80.75135	80.09016	37.74525	36.59219
556	80.60201	80.21008	37.39042	36.57687
557	80.72953	79.84218	37.64321	36.6769
558	80.55377	80.07619	37.5161	36.81787
559	80.79386	80.07735	37.32544	36.49455
560	80.44004	80.00866	37.48597	36.90128
561	80.67209	79.9912	37.65409	36.72577
562	80.68817	80.22987	37.65431	36.67614
563	80.43544	79.98422	37.72941	36.68678
564	80.41821	80.05523	37.70588	36.78822
565	80.78237	79.94463	37.77274	36.692
566	80.53653	79.99702	37.64805	36.86522
567	80.53998	79.94114	37.69511	36.90747
568	80.57559	80.05174	37.88357	36.79778
569	80.62958	79.97257	37.80891	36.67733
570	80.61235	79.97374	37.84717	36.70829
571	80.43315	80.10297	37.65739	36.96145
572	80.72034	79.91553	37.85674	36.99338
573	80.62958	79.73158	37.94306	36.79289
574	80.58708	79.77233	37.74382	36.79832
575	80.61005	80.08434	37.98451	36.88315
576	80.56985	79.93881	37.96307	36.8308
577	80.22062	79.96792	37.99792	37.08027
578	80.49977	79.81075	38.11491	36.76465
579	80.55262	79.93532	37.99704	36.9961

580	80.656	80.02031	37.77054	36.94744
581	80.49862	79.88758	37.92711	37.16628
582	80.76514	79.82821	38.08413	37.1211
583	80.43315	80.10413	37.91238	37.06691
584	80.26083	79.92833	37.93437	36.9923
585	80.6112	79.94347	38.07335	37.08277
586	80.56066	79.85964	38.1148	37.11741
587	80.59167	79.46148	38.0551	37.07408
588	80.44578	78.86539	38.12393	36.99088
589	80.39524	79.15878	38.10183	37.25838
590	80.64222	78.93059	37.99836	37.169
591	80.48599	79.10057	38.19188	36.87283
592	80.35273	79.23329	38.09292	36.98708
593	80.18846	79.16809	38.03982	37.07451
594	80.55032	79.27054	38.04641	37.11448
595	80.55377	79.60468	38.30283	37.32746
596	80.40098	79.25075	38.18408	37.1286
597	80.54917	79.55112	38.25687	37.29194
598	80.46072	79.66289	38.29667	37.18714
599	80.64681	79.56276	38.39486	37.14565
600	80.39179	79.61865	38.38518	37.33321
601	80.71574	79.72459	38.2815	37.3192
602	80.63992	79.78862	38.15791	37.32746
603	80.42051	79.48709	38.25082	37.14402
604	80.42166	79.73973	38.44819	37.16618
605	80.54572	79.64193	38.47348	37.33376
606	80.54343	79.5942	38.42861	37.29716
607	80.62039	79.5453	38.37045	37.50449
608	80.68932	79.58954	38.40003	37.34614
609	80.45382	79.58139	38.42334	37.31899
610	80.63762	79.70014	38.59641	37.25415
611	80.78122	79.78397	38.69877	37.32626
612	80.53653	79.57441	38.60619	37.45963

613	80.69047	79.70596	38.6438	37.38643
614	80.66749	79.85382	38.40827	37.26446
615	80.82143	79.54879	38.63698	37.65067
616	80.38834	79.82006	38.42004	37.50101
617	80.55262	79.73274	38.73264	37.57302
618	80.64222	79.80027	38.69284	37.56357
619	80.59167	79.47195	38.61136	37.3494
620	80.30908	79.85964	38.73913	37.40761
621	80.7571	79.57441	38.65039	37.5084
622	80.80305	79.83985	38.61224	37.37209
623	80.50322	79.85848	38.84083	37.42553
624	80.65141	80.06688	38.71318	37.38111
625	80.59972	79.59653	38.80257	37.75874
626	80.62614	79.94812	38.82148	37.56824
627	80.78122	79.75835	38.84193	37.43031
628	80.7548	79.7828	38.95134	37.69107
629	80.78237	79.73274	38.81258	37.42195
630	80.5687	79.97839	38.91439	37.74961
631	80.72034	79.848	38.94848	37.62417
632	80.57789	79.79445	38.77288	37.54858
633	80.69047	79.71295	38.86766	37.55825
634	80.34469	79.90388	38.77332	37.61309
635	80.59053	79.64892	38.73022	37.63666
636	80.73067	80.0238	39.06701	37.63329
637	80.65141	79.74671	38.91066	37.44236
638	80.42281	80.06455	39.11077	37.66001
639	80.78467	80.3591	38.86975	37.887
640	80.72493	79.60002	38.70592	37.77981
641	80.656	79.79677	38.89218	37.75559
642	80.54687	79.93648	38.96497	37.79099
643	80.68587	79.88526	38.90923	37.69694
644	80.68128	80.06571	39.07889	37.66045
645		79.86314	39.10912	37.90948

646		80.06222	38.88251	37.65078
647		80.03893	39.07713	38.01657
648		79.9097	38.94815	37.76688
649		79.92368	39.25712	38.01983
650		79.91087	39.20039	37.70378
651		80.0564	39.25338	37.97302
652		79.84567	38.91802	38.06523
653		79.80492	39.14332	37.72822
654		80.07503	39.24481	37.90449
655		79.69898	39.07834	38.03015
656		79.68617	39.19841	38.04579
657		79.95977	39.2414	38.05632
658		79.74089	39.33365	38.00343
659		80.04359	39.1409	38.23476
660		79.70014	39.13892	37.98236
661		79.75137	39.30847	38.05502
662		80.23336	39.3773	37.90188
663		80.13557	39.53036	37.84931
664		79.97374	39.5109	38.05719
665		79.81075	39.25415	38.04068
666		79.97257	39.45515	37.90025
667		80.05523	39.51255	38.06783
668		79.7211	39.63042	38.03959
669		79.85033	39.47791	38.21195
670		79.71295	39.50628	38.2012
671		80.0564	39.57764	37.86593
672		79.8154	39.39083	37.8088
673		79.89457	39.51585	37.76243
674		80.00983	39.50177	37.97823
675		80.0401	39.57511	37.94011
676		79.9749	39.63163	38.16656
677		79.8154	39.56642	37.98887
678		80.14721	39.29737	38.03655

679		79.95744	39.66417	38.00419
680		79.85033	39.58094	38.33816
681		80.08783	39.66461	38.25366
682		80.03195	39.68386	38.05914
683		80.05058	39.36411	38.27647
684		80.1053	39.75665	38.13636
685		79.96326	39.81547	38.08858
686		80.08317	39.80063	38.06251
687		79.93881	39.67319	38.40375
688		80.01914	39.73246	38.15667
689		79.97607	39.91751	38.41896
690		80.15186	39.94775	38.35792
691		79.95045	39.72487	38.20924
692		80.17981	39.76489	38.29591
693		80.10646	39.90322	38.26767
694		79.98887	39.89882	38.24682
695		80.13091	39.63921	38.25485
696		79.99586	39.73455	38.42287
697		80.09831	39.75907	38.43742
698		80.23336	39.84593	38.46142
699		80.03428	39.8578	38.48869
700		80.13906	39.76181	38.32925
701		80.2485	39.82317	38.41787
702		79.95744	39.80283	38.56569
703		80.23802	39.8257	38.36466
704		80.28342	39.95874	38.42645
705		80.43244	39.8677	38.41212
706		80.24617	40.05319	38.32339
707		80.3754	39.92411	38.39995
708		80.31951	39.91388	38.33175
709		80.32184	40.1924	38.46609
710		79.95162	39.86066	38.48499
711		80.46271	39.87837	38.5936

712		80.17049	39.90388	38.40832
713		80.3265	39.9251	38.6062
714		80.44292	40.02593	38.53582
715		80.22754	40.03153	38.44904
716		80.04592	40.10168	39.1841
717		80.07735	40.09476	38.53669
718		80.20076	40.08761	38.54755
719		80.2613	40.36898	38.62987
720		80.2485	40.26991	38.70264
721		80.26945	40.06045	38.71166
722		80.34862	40.16436	38.55928
723		80.54305	40.26783	38.54549
724		80.16234	40.30279	38.47956
725		80.45107	40.06848	38.68559
726		80.25781	40.1041	38.83319
727		80.44176	40.21604	38.74728
728		80.38587	40.18602	38.61586
729		80.22288	40.33501	38.56819
730		80.14837	40.25353	38.6844
731		80.43477	40.1913	38.66137
732		80.38937	40.43441	38.66539
733		80.52442	40.23825	38.72415
734		80.4208	40.27728	38.6681
735		80.46504	40.37459	38.77204
736		80.26247	40.25001	38.82982
737		80.54887	40.51104	38.82167
738		80.31253	40.33457	38.85567
739		80.33232	40.4918	38.74804
740		80.53606	40.29092	38.73294
741		80.38122	40.51874	39.02412
742		80.34396	40.46398	38.58643
743		80.44874	40.48916	39.00359
744		80.53606	40.67532	38.84959

745		80.38471	40.49279	38.65084
746		80.41964	40.55624	38.77649
747		80.33116	40.54777	38.77237
748		80.50928	40.31895	39.04986
749		80.52791	40.50709	38.75043
750		80.29506	40.4929	38.92496
751		80.30554	40.56261	38.73946
752		80.22638	40.63705	39.06028
753		80.50113	40.84751	38.64508
754		80.69672	40.58416	38.80875
755		80.2287	40.5669	39.05192
756		80.25082	40.69962	38.94027
757		80.66995	40.53469	38.90215
758		80.65481	40.56965	38.80669
759		80.54654	40.66498	
760		80.6129	40.60363	
761		80.2124	40.75492	
762		80.6292	40.62804	
763		80.58845	40.7381	
764		80.38587	40.65509	
765		80.5151	40.72095	
766		80.62687	40.94625	
767		80.42546	40.7867	
768		80.54188	40.68257	
769		80.53257	40.66135	
770		80.51627	40.7922	
771		80.57215	40.94383	
772		80.66762	40.73942	
773		80.04941	41.01508	
774		80.41964	40.88907	
775		80.68159	40.91095	
776		81.02737	41.03311	
777		80.91909	40.96923	

778		81.00641	41.09215	
779		81.30212	40.90215	
780		81.27884	40.94097	
781		81.11119	41.04355	
782		81.35568	40.8386	
783		81.64091	40.95911	
783			40.92238	
783			40.9237	
783			41.01178	
783			40.99474	
783			41.16945	
783			41.0352	
783			40.97241	
783			41.3047	
783			41.24917	
783			40.99583	
783			41.10634	
783			41.12272	
783			41.21113	
783			41.26599	
783			40.98781	
783			41.24653	
783			41.40025	
783			41.08347	
783			41.1865	
783			41.08006	
783			41.18089	
783			41.16582	
783			41.1998	
783			41.382	
783			41.36792	
783			41.33691	
783			41.15186	

783			41.19991	
783			41.39684	
783			41.27523	
783			41.29007	
783			41.32449	
783			41.52406	
783			41.31833	
783			41.44742	
783			41.29898	
783			41.58233	
783			41.52329	
783			41.27413	
783			41.72241	
783			41.5643	
783			41.55836	
783			41.57189	
783			41.69537	
783			41.66447	
783			41.6692	
783			41.64688	
783			41.53714	
783			41.60564	
783			41.67524	
783			41.66282	
783			41.81632	
783			41.48062	
783			41.44995	
783			41.3964	
783			41.55067	
783			41.54935	
783			41.56771	
783			41.69064	
783			41.65721	

783			41.70185	
783			41.85084	
783			41.63709	
783			41.66843	
783			41.73605	
783			41.69372	
783			41.94617	
783			41.69713	
783			41.85909	
783			41.97861	
783			41.93683	
783			41.75683	
783			41.7742	
783			41.91681	
783			41.69471	
783			42.04744	
783			41.90043	
783			41.7057	
783			41.8901	
783			41.84677	
783			42.10572	
783			41.8681	
783			41.89076	
783			41.81731	
783			41.95508	
783			41.89845	
783			41.87679	
783			42.20874	
783			41.99708	
783			42.08592	
783			42.23282	
783			42.10869	
783			42.15245	

783			42.22788	
783			42.00423	
783			41.94243	
783			41.99279	
783			42.08999	
783			42.18631	
783			42.04348	
783			42.11385	
783			42.09824	
783			42.10715	
783			42.00038	
783			42.15531	
783			42.22051	
783			42.25437	
783			42.37818	
783			42.10231	
783			42.15849	
783			42.22293	
783			42.14453	
783			42.2547	
783			42.25635	
783			42.24921	
783			42.39369	
783			42.13485	
783			42.27285	
783			42.15871	
783			42.3563	
783			42.12452	
783			42.22645	
783			42.20588	
783			42.35575	
783			42.23964	
783			42.16597	

783			42.57049	
783			42.25602	
783			42.30748	
783			42.3055	
783			42.36224	
783			42.42942	
783			42.5507	
783			42.2524	
783			42.36334	
783			42.47285	
783			42.29022	
783			42.28604	
783			42.24767	
783			42.25789	
783			42.41942	
783			42.46648	
783			42.28395	
783			42.52025	
783			42.4049	
783			42.4767	
783			42.43096	
783			42.57258	
783			42.37511	
783			42.5032	
783			42.4833	
783			42.5518	
783			42.69936	
783			42.59611	
783			42.53707	
783			42.6324	
783			42.5816	
783			42.47802	
783			42.72278	

783			42.30506	
783			42.56181	

Table Apx. 2. 6: Time course of percent vesicle fusion of all constructs at pH 7.45 in lipid:protein 100:1.

Time (s)	FPHM	G10V	L9R	V2E
1	9.74706	16.00524	0.00582	0.15175
2	16.8678	20.41811	0.10513	0.46208
3	20.67024	23.1001	0.21151	0.74596
4	23.64142	25.51357	0.43658	0.47079
5	25.94089	27.53155	0.48151	0.40504
6	28.32198	29.4298	0.66337	0.52147
7	30.15357	30.85454	1.26825	0.52683
8	32.20901	32.73598	1.65079	0.43797
9	34.19885	34.37015	1.46186	0.66704
10	36.39784	36.11726	1.56755	0.85793
11	38.37463	37.84592	1.35844	0.50718
12	40.67245	39.79872	1.55433	1.00751
13	42.61448	41.76694	1.57371	0.87746
14	44.78345	43.35357	1.63277	0.87635
15	46.72679	45.3024	1.59366	1.19561
16	48.76147	47.26116	1.69902	0.89008
17	50.67171	48.92219	1.93515	1.11825
18	52.31561	50.46771	1.88556	1.09894
19	53.95418	52.4281	1.97757	1.07405
20	55.18002	53.94185	2.14233	1.22877
21	56.3348	55.38282	2.21907	1.17998
22	57.70419	56.64813	2.33001	1.14984
23	58.5364	58.1933	2.39055	1.29574
24	59.53126	59.41142	2.54094	1.50795
25	60.80965	60.55362	2.6382	1.35859
26	61.52751	61.41678	2.81801	1.41497

27	61.99599	62.36906	2.85986	1.35056
28	62.61063	63.06975	3.04936	1.35011
29	63.16987	64.11244	3.04161	1.47949
30	63.55068	64.69212	3.22792	1.75142
31	64.12238	65.23677	3.10307	1.83916
32	64.74568	66.10892	3.13727	1.64437
33	65.12115	66.57905	3.33567	1.59101
34	65.3494	67.12942	3.37785	1.7829
35	65.9491	67.63166	3.49484	1.72809
36	66.18304	68.07761	3.46109	1.96185
37	66.11483	68.32932	3.73086	1.96743
38	66.37891	68.74478	3.62448	1.89476
39	67.01597	68.87455	3.93359	2.09078
40	68.01451	69.29445	3.94476	2.13208
41	70.26771	69.47117	4.08159	2.14849
42	70.44756	69.86794	4.12685	2.23132
43	70.51661	70.22617	4.25171	2.05562
44	70.38931	70.34531	4.25821	2.20531
45	70.38053	70.86216	4.42456	2.31996
46	70.17577	70.93492	4.41077	2.11567
47	70.52028	71.0418	4.55637	2.39888
48	70.41161	71.39991	4.53208	2.3348
49	70.44127	71.26664	4.72523	2.51263
50	70.20887	71.54918	4.79171	2.49756
51	70.67783	71.93322	4.93081	2.6083
52	70.44614	71.70861	4.91371	2.82966
53	70.81722	71.98345	4.92237	2.56253
54	70.47959	72.12408	5.16159	2.83625
55	70.7292	72.06135	5.26227	2.6275
56	70.87357	72.35394	5.31518	2.87376
57	70.94025	72.72467	5.41038	2.8482
58	70.80358	72.67655	5.42007	2.84965
59	70.94606	72.58871	5.37253	3.18543

60	71.2239	72.50859	5.65005	2.95134
61	71.02697	72.98105	5.68734	2.99399
62	70.95626	72.84509	5.61915	3.02513
63	70.83253	73.08815	5.70387	3.08575
64	70.8126	73.07811	5.87593	3.1045
65	70.88188	73.06444	6.24433	3.19771
66	70.78756	73.21372	6.04924	3.16076
67	71.04476	73.37408	6.25094	3.13978
68	7.09E+01	73.00791	6.24866	3.18867
69	7.08E+01	73.3763	6.45709	3.52691
70	7.09E+01	73.53399	6.35265	3.43191
71	70.8801	73.55816	6.48628	3.44765
72	71.05366	73.68419	6.58536	3.44654
73	71.11001	73.48995	6.5808	3.54901
74	71.10835	73.5056	6.66449	3.50838
75	71.18878	73.73091	6.77076	3.56509
76	71.04298	73.63689	6.8435	3.5316
77	71.30243	73.65301	6.88467	3.61075
78	71.12342	73.81443	7.08192	3.68621
79	71.47647	73.65417	7.15535	3.61331
80	70.97975	73.75871	7.15444	3.90087
81	71.34514	73.92901	7.17998	3.8512
82	71.13682	73.90939	7.35979	3.82519
83	71.23837	74.04885	7.52409	3.82273
84	71.27278	73.91324	7.52044	4.01697
85	71.31157	73.74598	7.63503	4.02612
86	71.05734	73.95797	7.49718	3.95356
87	71.08593	73.92188	7.56605	4.0288
88	71.24632	73.99418	7.66377	3.9913
89	71.1316	74.21529	7.83423	4.01429
90	71.25154	73.9804	7.78634	4.09846
91	71.42166	74.10339	7.89717	4.41493
92	71.31275	74.20921	7.96889	4.17024

93	71.27835	74.49748	7.97687	4.25207
94	71.17028	74.10549	8.21152	4.17325
95	71.55916	74.34365	8.11175	4.25207
96	71.25474	74.28303	8.24482	4.25162
97	71.17051	74.44328	8.33204	4.51016
98	71.30291	74.31784	8.46544	4.34271
99	71.25759	74.37554	8.52428	4.57713
100	71.17775	74.62082	8.44595	4.42364
101	71.3455	74.33022	8.5196	4.30509
102	71.215	74.69826	8.6342	4.6862
103	71.32497	74.57504	8.65278	4.59321
104	71.04678	74.30184	8.68174	4.77227
105	71.06232	74.52096	8.72188	4.69122
106	71.04749	74.73097	8.78938	4.70618
107	71.25629	74.60914	8.93874	4.73788
108	71.12472	74.74697	8.90055	4.74201
109	71.11559	74.3864	8.99142	4.76144
110	70.98817	74.55004	9.03498	4.74201
111	71.00146	74.83036	8.95003	4.74592
112	71.08047	74.53988	9.10784	4.82116
113	71.215	74.50694	9.17887	5.06485
114	70.9667	74.71461	9.27488	5.05224
115	70.8005	74.71251	9.18434	5.05436
116	71.16304	74.4698	9.41375	4.96907
117	71.10491	74.64885	9.42356	5.25429
118	71.13386	74.87837	9.44306	5.1268
119	71.19436	74.79532	9.3182	5.07188
120	71.02768	74.75795	9.60998	5.18005
121	71.16162	74.93186	9.65684	5.01897
122	71.07442	74.7423	9.69869	5.06742
123	71.0864	74.76612	9.66004	5.32763
124	71.21464	74.9752	9.74977	5.27271
125	71.05781	74.83702	9.72047	5.22348

126	71.385	74.9481	9.91692	5.25697
127	71.36222	74.67163	9.80211	5.32573
128	71.41786	74.96562	9.77816	5.44205
129	71.29745	74.70352	9.94304	5.42821
130	71.19471	74.99178	9.96002	5.32249
131	71.10242	74.99949	10.17598	5.45824
132	7.10E+01	74.92018	9.96949	5.4828
133	7.13E+01	75.14736	10.25294	5.42799
134	7.10E+01	75.02005	10.21862	5.57802
135	7.12E+01	74.90056	10.18054	5.62345
136	7.09E+01	75.13253	10.12809	5.52812
137	7.11E+01	75.04855	10.21258	5.59632
138	7.12E+01	74.96515	10.54848	5.67904
139	7.10E+01	74.94775	10.52899	5.74245
140	7.13E+01	74.99097	10.53309	5.81144
141	7.09E+01	75.05088	10.5462	5.74557
142	7.11E+01	74.9599	10.50903	5.73765
143	7.12E+01	75.07646	10.45145	5.88612
144	7.12E+01	75.09106	10.55795	5.67848
145	7.10E+01	75.27923	10.66935	5.9339
146	7.11E+01	75.04072	10.69967	5.67603
147	7.12E+01	74.99739	10.73217	5.85888
148	7.12E+01	75.21359	10.75315	5.91537
149	7.09E+01	75.15297	10.75064	5.95823
150	7.10E+01	75.01584	10.75805	5.99887
151	71.25593	75.02834	10.79899	5.97263
152	71.21156	75.07144	10.94573	6.05602
153	71.26601	75.19268	10.93399	5.96002
154	71.22402	75.12716	10.99453	6.19969
155	71.18594	75.14351	11.10354	6.17725
156	71.2602	75.14199	10.95702	6.14421
157	71.09625	75.39872	11.10182	6.21867
158	71.26376	75.32875	11.12486	6.17703

159	71.46532	75.3562	11.19076	6.30641
160	71.14928	75.0628	11.11722	6.36736
161	71.40956	75.41297	11.21288	6.21275
162	71.32687	75.44194	11.16727	6.09096
163	71.1526	75.13685	11.33979	6.25193
164	71.09969	75.29196	11.3765	6.34983
165	71.55453	75.53713	11.4749	6.28576
166	71.17514	75.47335	11.32724	6.53235
167	71.27289	75.33389	11.37251	6.27571
168	71.10965	75.72051	11.40147	6.47062
169	71.25249	75.53176	11.53453	6.35106
170	71.21026	75.18836	11.50523	6.44718
171	70.92577	75.38073	11.56406	6.52922
172	71.33375	75.18591	11.67466	6.53235
173	71.20942	75.46413	11.71548	6.49194
174	71.09281	75.28542	11.71104	6.50455
175	71.08308	75.46167	11.55266	6.59252
176	71.10242	75.15332	11.67592	6.55423
177	71.09364	75.33191	11.83076	6.62578
178	71.11345	75.49917	11.72939	6.65939
179	71.06671	75.64622	11.93018	6.67044
180	71.2583	75.59857	11.87237	6.6998
181	71.28049	75.35737	11.83338	6.67222
182	71.23161	75.78603	11.83452	6.76454
183	71.16209	75.49169	12.05903	7.37505
184	71.10704	75.44544	11.97944	7.4254
185	71.15331	75.69715	12.04432	7.67277
186	71.29069	75.34464	12.12789	7.5857
187	71.25213	75.60394	12.05161	7.35105
188	71.26174	75.47908	11.83406	7.2632
189	71.37421	75.91416	12.10931	7.2671
190	71.34953	75.61515	12.03223	7.22279
191	71.02448	75.52008	12.16735	7.22

192	71.23529	75.7163	12.24226	7.11328
193	71.24751	75.53818	12.2922	7.17065
194	71.42368	75.58326	12.36654	7.18584
195	71.48881	75.33973	12.27133	7.21654
196	71.19899	75.64424	12.30827	7.14107
197	71.43091	75.49893	12.21558	7.13728
198	71.28084	75.5098	12.48831	7.03391
199	71.55987	75.7302	12.42765	7.15815
200	71.49213	75.75181	12.46106	7.07376
201	71.41941	75.52159	12.49185	7.26197
202	71.37195	75.47487	12.61932	7.269
203	71.48418	75.56808	12.48888	7.28697
204	71.25225	75.70591	12.47828	7.32861
205	71.39509	75.84864	12.62263	7.25449
206	71.22354	75.53888	12.57463	7.36646
207	71.04358	75.65124	12.66379	7.25081
208	71.3449	75.52031	12.48387	7.22078
209	71.11713	75.56224	12.67268	7.48478
210	71.45761	75.68406	12.74589	7.2546
211	71.12045	75.93612	12.72605	7.49081
212	71.47943	75.52428	12.68044	7.4657
213	71.35997	75.58198	12.86834	7.50387
214	71.39912	75.85494	13.01418	7.49584
215	71.30042	75.60055	12.98236	7.4629
216	71.28689	75.76396	12.8794	7.45576
217	71.6008	75.53456	13.00254	7.56907
218	71.37848	75.39732	12.8615	7.60423
219	71.46318	75.68465	12.93379	7.40307
220	71.35784	75.48001	12.95021	7.5732
221	71.37302	75.71689	12.83402	7.68349
222	71.28405	75.57602	13.18452	7.60099
223	71.50933	75.86125	13.13401	7.62421
224	71.37338	75.82072	13.10733	7.75214

225	71.47611	75.83999	13.09216	7.69164
226	71.48596	75.74702	12.90061	7.66484
227	71.45334	75.70415	13.06913	7.74087
228	71.37385	75.88216	13.15271	7.72033
229	71.40446	75.56014	13.20915	7.77491
230	71.36258	75.89162	13.2291	7.85227
231	71.427	75.98728	13.38668	7.70481
232	71.36104	75.90353	13.26673	7.96736
233	71.4786	75.98716	13.26707	7.82303
234	71.56105	75.96532	13.28098	7.93231
235	71.61515	75.68441	13.24256	7.88241
236	71.27064	75.96497	13.40127	7.85116
237	71.46449	75.77015	13.40116	7.87013
238	71.58881	75.82388	13.28634	7.88643
239	71.60305	75.69399	13.40891	7.99092
240	71.55928	75.85284	13.35042	7.97652
241	71.35689	75.863	13.38292	7.89369
242	71.47516	76.11238	13.41735	7.99438
243	71.35617	76.02886	13.51758	8.02206
244	71.2519	75.92491	13.51313	8.11851
245	71.29057	75.73522	13.6276	8.01436
246	71.39153	75.71128	13.5763	8.07676
247	71.46449	75.79456	13.61461	8.11661
248	71.36578	75.84817	13.52943	8.09228
249	71.392	75.86546	13.66877	8.0714
250	71.48228	75.94103	13.77902	8.11862
251	71.4238	75.88905	13.54768	8.14977
252	71.22473	75.86265	13.79385	8.35115
253	71.53828	75.89057	13.69431	8.11405
254	71.80093	75.75041	13.71449	8.13604
255	71.53638	75.92047	13.58188	8.23037
256	71.46828	75.82166	13.68211	8.38587
257	71.50067	75.98681	13.78872	8.26542

258	71.52202	75.71408	13.77173	8.32659
259	71.6142	75.79993	13.83056	8.3487
260	71.47932	75.97992	13.86146	8.26464
261	71.41798	76.0041	13.95507	8.26721
262	71.45998	75.95434	13.93421	8.44849
263	71.50684	75.85822	13.86363	8.38285
264	71.51633	75.93601	14.02291	8.48745
265	71.62251	75.9283	13.82737	8.4226
266	71.45274	75.82504	14.01402	8.38475
267	71.72501	76.20652	14.02177	8.40607
268	71.32462	76.09871	13.83227	8.5436
269	71.42486	75.97946	13.90844	8.54371
270	71.60922	75.87889	14.04424	8.48198
271	71.54848	75.74503	13.98506	8.51101
272	71.84886	75.94348	14.08209	8.49984
273	71.4213	76.20184	14.04469	8.64095
274	71.57565	75.84548	14.12656	8.54193
275	71.76973	75.95411	14.1594	8.63548
276	71.56877	75.92584	14.0456	8.70056
277	71.94792	76.20009	14.05826	8.68415
278	71.26317	75.95271	14.18038	8.7029
279	71.88243	76.02104	14.10159	8.69866
280	71.68716	76.11565	14.23043	8.59964
281	71.55607	76.25779	14.22815	8.66997
282	71.57185	75.97887	14.28984	8.67198
283	71.49059	76.19052	14.25335	8.7432
284	71.52108	75.95866	14.11208	8.71406
285	71.50731	76.13597	14.31788	8.72422
286	71.7778	75.97981	14.20455	8.70949
287	71.57885	75.90891	14.15107	8.81341
288	72.02705	75.97583	14.4205	8.7826
289	71.54006	76.23326	14.33966	8.82726
290	71.44717	75.99744	14.45836	8.86253

291	71.35795	75.99861	14.23032	8.87347
292	71.49937	76.12499	14.42039	8.98242
293	71.71385	76.06659	14.35768	8.83641
294	71.46816	76.07967	14.59267	9.13927
295	71.72477	76.09217	14.55311	8.84121
296	71.69179	76.14263	14.42301	9.0647
297	71.77353	76.13667	14.66964	8.87135
298	71.53104	75.91043	14.36475	9.01469
299	71.69701	76.2808	14.45893	9.06637
300	71.86677	76.14928	14.44525	9.05554
301	71.86642	76.18958	14.60807	9.27278
302	71.64896	76.27251	14.57945	9.15981
303	71.61302	76.07079	14.42962	8.94458
304	71.88374	76.04673	14.45745	9.08434
305	71.59581	76.28536	14.49598	9.06492
306	71.64861	76.16984	14.56417	9.1665
307	71.77839	76.06612	14.65516	9.03746
308	72.00534	75.91346	14.61217	9.35427
309	72.21188	76.03879	14.67215	9.24688
310	71.77092	75.98728	14.76849	9.0465
311	71.87294	76.09123	14.68811	9.16226
312	71.82691	76.26211	14.81969	9.17555
313	71.77317	75.9763	14.66667	9.21596
314	71.89252	76.1021	14.77112	9.21986
315	71.87377	76.22147	14.83565	9.26172
316	71.63995	76.15711	14.86017	9.08401
317	71.75063	75.92339	14.78947	9.24331
318	72.00925	76.16143	14.81821	9.19062
319	71.98363	76.19799	15.01603	9.32602
320	71.71362	75.97268	14.87339	9.30024
321	71.75514	76.23432	14.7108	9.37637
322	71.92134	76.07745	14.9174	9.48476
323	72.0032	76.18351	14.95811	9.44156

324	72.0223	76.00176	15.03553	9.4794
325	71.78314	76.09158	14.83063	9.40082
326	71.96963	76.03482	15.10736	9.43163
327	71.72536	76.09521	15.06768	9.62776
328	71.98802	76.02454	15.07019	9.4362
329	72.02218	76.03692	15.0353	9.3623
330	71.92645	76.30183	15.14852	9.53076
331	71.98885	76.14893	14.90612	9.40986
332	71.89608	76.14905	15.05628	9.55397
333	72.00652	76.28045	15.03667	9.5849
334	71.82276	75.96988	15.0052	9.52506
335	72.17392	76.08131	15.19653	9.61425
336	71.79405	76.25289	15.19653	9.50352
337	71.75692	76.24716	15.08182	9.61068
338	72.00059	76.09801	15.24396	9.67811
339	71.87852	76.45729	15.18547	9.4909
340	72.09147	76.31584	15.32719	9.51568
341	71.87591	76.23782	15.22321	9.62631
342	72.05896	76.38744	15.23313	9.71003
343	72.01732	76.23595	15.19025	9.58903
344	71.83735	76.35007	15.17418	9.80012
345	71.91553	76.44759	15.29595	9.63267
346	72.04745	76.19157	15.25103	9.60186
347	72.12326	76.21423	15.22948	9.72734
348	72.06548	76.17568	15.34772	9.77076
349	71.93511	76.34189	15.35125	9.88027
350	72.19479	76.3218	15.40644	9.7308
351	71.9777	76.42891	15.27132	9.71774
352	72.22979	76.17358	15.29664	9.94814
353	72.18613	76.23607	15.54782	9.81229
354	72.0764	76.46582	15.38603	9.91744
355	72.22837	76.21796	15.3809	9.88596
356	72.2031	76.48135	15.41373	9.81519

357	72.21828	76.15991	15.6184	9.86676
358	72.26004	76.46395	15.33187	9.88284
359	72.02883	76.15349	15.32788	10.08846
360	72.16976	76.17919	15.37668	9.99793
361	72.06881	76.38008	15.62251	10.01836
362	72.17178	75.88975	15.4159	9.90974
363	71.96797	76.07477	15.55204	9.9266
364	72.3597	76.42353	15.39025	9.91811
365	71.95065	76.6666	15.58032	10.00965
366	72.30073	76.25686	15.48956	10.12686
367	71.93333	76.19589	15.52547	9.9919
368	72.05184	76.21972	15.43426	9.989
369	72.23086	76.13176	15.57439	9.92492
370	72.20962	76.3385	15.51943	9.98074
371	72.40347	76.57316	15.69947	10.12765
372	72.31734	76.30685	15.64132	10.20489
373	72.4463	76.12043	15.68465	10.19128
374	72.46801	76.51954	15.5818	10.12686
375	72.20856	76.41057	15.60267	10.27578
376	72.3298	76.00282	15.77803	10.26718
377	72.48307	76.42038	15.64257	10.09204
378	72.48236	76.43101	15.67906	10.16359
379	72.41806	76.5137	15.67256	10.23883
380	72.56541	76.22521	15.76298	10.30838
381	72.6195	76.97297	15.7794	10.27466
382	72.42732	76.46371	15.75648	10.32199
383	72.4393	76.43381	15.68351	10.16917
384	72.52756	76.25254	15.76982	10.28292
385	72.4406	76.4949	15.72467	10.17018
386	72.33585	76.42715	15.72159	10.19965
387	72.56564	76.132	15.79924	10.3364
388	72.51083	76.32052	15.81577	10.1944
389	72.22089	77.14326	15.83025	10.34544

390	72.39208	76.61322	15.83572	10.27098
391	72.41427	76.79683	15.84747	10.45707
392	72.57976	76.63798	15.90129	10.3556
393	72.55971	76.76658	15.90573	10.43173
394	72.63398	76.5526	15.92808	10.26651
395	72.60657	76.75011	16.00858	10.36564
396	72.34629	76.67699	15.94701	10.394
397	72.58201	76.45495	15.93355	10.37915
398	72.39825	76.60948	15.78464	10.48263
399	72.71192	76.58145	16.04176	10.42324
400	72.73814	76.55412	15.83949	10.63802
401	72.50004	76.3114	15.96308	10.41364
402	72.51214	76.30989	16.00117	10.60699
403	72.60242	76.22871	15.8884	10.49547
404	72.44215	76.55587	15.79399	10.45997
405	72.8092	76.27368	15.95499	10.72029
406	72.66411	76.39959	15.93287	10.47973
407	72.80315	76.55166	15.95795	10.83438
408	72.56885	76.49361	15.97027	10.63233
409	72.47631	76.4261	16.17539	10.61268
410	72.39066	76.27835	15.81634	10.60029
411	72.81489	76.56486	15.95259	10.57283
412	72.81715	76.5498	16.17562	10.63746
413	72.56458	76.45776	15.93025	10.62329
414	72.68179	76.63343	16.22898	10.67575
415	72.75854	76.47107	16.08417	10.57741
416	72.54524	76.40146	16.06205	10.85827
417	72.48438	76.60212	16.15703	10.71795
418	72.51143	76.29762	16.06023	10.70857
419	72.5259	76.47423	16.03731	10.84633
420	72.19159	76.50097	16.01884	10.73682
421	72.71227	76.52001	16.06798	10.84487
422	72.80089	76.67314	15.99113	10.7827

423	72.68143	76.40041	16.13069	10.79587
424	72.89639	76.55412	16.20127	10.96153
425	72.88121	76.5248	16.11154	10.61938
426	72.58071	76.55821	16.18964	10.92759
427	72.84396	76.56206	16.2072	10.87591
428	72.57051	76.63553	16.11507	10.72867
429	72.86484	76.5345	16.21131	10.81406
430	72.68001	76.83958	16.15692	10.78649
431	72.94586	76.46395	16.33525	10.91062
432	72.88489	76.35859	16.2324	10.91699
433	72.64121	76.58822	16.10572	10.79453
434	73.06924	76.53006	16.25498	10.87959
435	72.90292	76.31806	16.25931	10.86151
436	72.76696	76.43299	16.14301	10.99089
437	72.75214	76.50985	16.36626	11.02371
438	72.82759	76.75688	16.22887	10.87222
439	72.78974	76.61812	16.28348	10.967
440	73.10246	76.43089	16.3861	11.05809
441	72.95203	76.41839	16.29317	11.03442
442	72.86923	76.67594	16.39089	10.95427
443	73.13224	76.79613	16.19865	11.08332
444	72.84182	76.38627	16.49191	11.08399
445	72.76981	76.79181	16.38017	10.96823
446	72.9168	76.4852	16.34425	11.01533
447	72.86614	76.77464	16.3389	10.94166
448	73.18277	76.78352	16.40765	11.1839
449	72.75996	76.60609	16.49567	11.07852
450	73.11373	76.64709	16.44687	11.07774
451	73.08573	76.6701	16.33787	11.1609
452	73.12797	76.43802	16.47127	11.14728
453	73.04777	76.6722	16.45292	11.05318
454	73.02772	76.53438	16.41312	11.04458
455	72.98572	76.79893	16.43821	11.18133

456	73.12429	76.75198	16.53957	11.2002
457	72.94634	76.97612	16.48883	11.20433
458	73.16379	76.65387	16.6317	11.26193
459	73.05335	76.66508	16.36352	11.18937
460	73.13971	76.76027	16.62418	11.17285
461	73.39382	76.56977	16.65302	11.2281
462	73.17056	76.80524	16.71494	11.29642
463	72.99972	76.86831	16.55656	11.37735
464	73.32086	76.77896	16.5845	11.17552
465	73.16913	76.92274	16.50924	11.14081
466	73.05192	76.82556	16.70376	11.28414
467	73.2103	76.44923	16.63888	11.26606
468	73.17067	76.53508	16.53433	11.36519
469	73.38066	76.73878	16.70581	11.21314
470	73.21742	76.84215	16.6089	11.14762
471	73.18349	76.5206	16.82827	11.27912
472	73.42692	76.72406	16.53957	11.2521
473	73.16166	76.5206	16.72463	11.2847
474	73.32881	76.62151	16.49693	11.35715
475	73.28338	76.46722	16.68153	11.36574
476	73.38742	76.48556	16.86065	11.38215
477	73.29987	76.73458	16.79817	11.36876
478	73.30082	76.67139	16.58005	11.43975
479	73.2046	76.74719	16.78677	11.29743
480	73.29334	76.80384	16.75176	11.49501
481	73.1963	76.62548	16.85062	11.45695
482	73.11907	76.5554	16.81949	11.4584
483	73.31458	76.75887	16.79942	11.38974
484	73.17269	76.88093	16.55667	11.48441
485	73.49324	76.69697	16.91675	11.44768
486	73.4153	76.64954	16.70775	11.63276
487	73.26428	76.83327	16.68529	11.50227
488	73.32846	76.98336	16.71425	11.38506

489	73.12429	77.25469	16.69852	11.53978
490	73.25443	76.86446	16.82474	11.60765
491	72.97493	76.80454	16.6976	11.47726
492	73.51863	76.74871	16.71619	11.55306
493	73.42443	76.76798	16.78802	11.6446
494	73.37627	76.78865	16.75347	11.4421
495	73.40711	76.94061	16.79646	11.76985
496	73.30864	77.00345	16.74196	11.57461
497	73.59348	76.90359	16.9383	11.68869
498	73.65244	76.73037	16.80285	11.55663
499	73.28326	76.73014	16.74173	11.61457
500	73.46405	76.96351	16.81892	11.64058
501	73.41387	76.71402	16.86567	11.72497
502	73.52871	76.91819	16.88209	11.68825
503	73.36393	76.766	17.03636	11.64906
504	73.60381	76.75443	16.84515	11.75076
505	73.37638	77.06629	16.75176	11.67898
506	73.2275	76.79496	16.83853	11.67139
507	73.60381	76.88595	17.01994	11.54871
508	73.43036	77.01396	16.98311	11.70756
509	73.56169	76.83608	16.9529	11.7982
510	73.32703	76.6381	16.97262	11.84955
511	73.51186	76.8529	17.03784	11.64705
512	73.80548	77.01992	17.005	11.6542
513	73.77274	76.69486	17.08299	11.86909
514	73.73134	76.80372	16.77297	11.78179
515	73.58838	76.82101	17.21081	11.77498
516	73.57308	76.74941	17.05939	11.84989
517	73.60831	76.70421	17.06874	11.95147
518	73.62492	76.86025	17.04502	11.79932
519	73.57237	76.89191	16.76761	11.92222
520	73.67582	76.78655	17.00192	11.77822
521	73.66087	76.77651	16.99714	11.82678

522	73.80477	76.71811	17.11321	11.70198
523	73.83158	76.88945	17.02781	11.9901
524	73.56916	76.69954	16.98106	11.87779
525	73.58815	76.86796	16.95871	11.93026
526	73.59479	77.01712	17.11264	11.91954
527	73.80809	76.8453	16.88699	11.92647
528	73.45409	76.77756	16.98425	11.89967
529	73.60025	76.89962	17.02826	12.03129
530	73.77238	77.00205	17.0107	11.98474
531	73.69159	76.90803	17.06942	11.946
532	73.64663	76.87322	17.00056	11.8951
533	74.01534	77.01618	17.01595	12.01108
534	73.87607	76.80302	17.12301	11.91575
535	74.03729	77.1762	17.079	12.02068
536	73.78828	76.88303	17.04981	11.84542
537	73.7324	76.77791	17.16304	12.01153
538	73.92934	77.01233	17.06657	12.09112
539	73.58186	76.89553	17.1953	11.89487
540	73.69883	76.99773	17.12849	11.99657
541	73.84368	76.77265	17.079	11.87645
542	73.65838	77.04655	17.06931	12.12483
543	73.93135	77.05181	17.19952	11.99612
544	73.49359	76.87077	16.97764	12.03084
545	73.67914	76.90803	17.14684	12.01566
546	73.61484	76.97881	17.23932	12.08052
547	73.95686	76.7883	17.02359	12.12562
548	73.76728	77.04515	17.2693	12.233
549	73.94155	76.80314	17.17535	12.13667
550	73.59847	77.18776	17.04673	12.07348
551	73.68198	77.20856	17.12324	12.22497
552	73.72742	76.81307	17.25266	12.21671
553	73.63133	76.8592	17.11059	12.18701
554	73.56098	77.033	17.26144	12.30489

555	73.7241	77.01572	17.01367	12.24819
556	73.65197	76.8877	17.19679	12.13722
557	73.40118	76.8856	17.0993	12.19773
558	73.84689	77.01163	17.14753	12.22619
559	73.69764	77.0768	17.29108	12.28815
560	73.90893	76.89751	17.32665	12.24104
561	73.85199	76.92671	17.2579	12.09414
562	73.71188	77.11278	17.26645	12.17853
563	73.77203	76.96129	17.22826	12.01343
564	73.89932	76.89553	17.30225	12.28078
565	73.76313	76.96654	17.25209	12.2973
566	73.88342	77.13918	17.34684	12.2195
567	73.79694	76.95007	17.2262	12.24729
568	73.7967	77.03499	17.19679	12.30657
569	73.74545	77.03546	17.29678	12.33716
570	73.77203	77.27642	17.25608	12.29585
571	73.64295	77.10694	17.22005	12.25578
572	73.83775	77.26789	17.19713	12.26649
573	73.63916	76.93758	17.46006	12.33492
574	73.86254	77.08661	17.32951	12.26303
575	73.65624	77.02973	17.34638	12.22698
576	74.07217	77.3444	17.30898	12.39208
577	73.62635	77.2784	17.44546	12.40648
578	73.73418	77.13462	17.45687	12.24272
579	73.58696	77.20669	17.24547	12.30076
580	73.85329	77.00707	17.33646	12.38047
581	73.62919	76.94493	17.40259	12.34274
582	73.82257	76.98231	17.41399	12.36462
583	73.83372	77.15693	17.31822	12.16245
584	73.86729	77.16394	17.29986	12.48596
585	73.68412	77.16195	17.38024	12.43807
586	73.71852	77.04316	17.39404	12.39732
587	73.89612	77.23589	17.44045	12.55986

588	73.97323	77.10098	17.50145	12.24283
589	73.8266	77.38738	17.57693	12.41463
590	73.73062	77.13555	17.39222	12.60797
591	73.86088	76.92777	17.35824	12.5334
592	73.77689	77.26555	17.49917	12.43584
593	73.94428	77.0865	17.46622	12.35345
594	73.77594	77.13182	17.46508	12.43852
595	73.71532	77.28237	17.57134	12.58888
596	73.99209	77.07505	17.50646	12.45359
597	74.15237	77.24838	17.5539	12.43316
598	73.89232	77.06232	17.42437	12.60663
599	73.82197	77.28962	17.41228	12.57303
600	73.89446	77.27992	17.48697	12.55048
601	73.93171	77.46599	17.48754	12.74472
602	74.04239	77.0719	17.5588	12.53128
603	73.81307	76.99528	17.54683	12.58431
604	74.01843	77.27572	17.55561	12.5996
605	73.99316	77.28483	17.63314	12.52313
606	74.01665	77.29662	17.42152	12.53697
607	74.06126	77.34463	17.72584	12.60663
608	73.72517	77.16195	17.57682	12.63476
609	73.90751	77.17702	17.44581	12.50706
610	73.93966	77.25049	17.58217	12.68187
611	73.66561	77.0434	17.57932	12.85568
612	73.99743	77.20961	17.52448	12.77084
613	74.12401	77.03814	17.6019	12.62137
614	74.05829	77.41401	17.56826	12.5631
615	73.79836	77.05648	17.67932	12.65932
616	74.16138	77.15004	17.44273	12.63119
617	74.16482	77.27431	17.51821	12.5631
618	74.04477	77.13182	17.7304	12.73758
619	74.07727	77.10589	17.57739	12.84742
620	74.13066	77.43527	17.66803	12.62472

621	74.01179	77.3792	17.55743	12.63298
622	74.16625	77.10343	17.79345	12.63197
623	74.33696	77.30936	17.60258	12.84999
624	74.14382	77.36425	17.67065	12.79998
625	74.02887	77.58279	17.8093	12.758
626	73.98853	76.99434	17.79596	12.7973
627	73.89897	77.2499	17.75058	12.77564
628	73.9654	77.20856	17.82128	12.64113
629	74.10396	77.22678	17.80748	12.75611
630	73.89932	77.20914	17.78114	12.77486
631	73.92542	77.26193	17.77202	12.71413
632	74.28025	77.27116	17.79482	12.89844
633	73.84724	77.25084	17.62904	12.92601
634	73.94796	77.19244	17.67544	12.7263
635	74.00135	77.59015	17.73701	12.71324
636	73.87002	77.20984	17.66678	12.76347
637	74.02994	77.39999	17.7418	12.63186
638	73.90252	77.31625	17.61752	12.97568
639	73.82731	77.33634	17.95491	12.88471
640	73.97311	77.10098	17.68217	12.7762
641	74.24656	77.11325	17.67807	12.84173
642	73.82126	77.53455	17.52345	12.88124
643	74.00562	77.54156	17.65731	12.90893
644	73.83834	77.11535	17.6865	12.86707
645	73.95781	77.33587	17.84248	12.73601
646	73.84843	77.32547	17.80223	12.81985
647	73.8056	77.42335	17.77065	12.92188
648	73.868	77.14618	17.91591	12.86885
649	73.98248	77.30573	17.94077	12.72161
650	73.92684	77.43316	17.81375	12.80232
651	73.74581	77.51703	17.67772	13.00426
652	73.77416	77.3521	18.13928	13.02391
653	74.16423	77.35456	17.91454	12.77888

654	73.90407	77.4174	17.7784	12.78736
655	74.02958	77.45629	17.82173	12.77609
656	74.07229	77.54202	17.74887	12.98662
657	74.15806	77.56211	17.81341	12.89866
658	73.92257	77.50944	17.75754	12.9672
659	73.96006	77.33564	17.90326	13.00292
660	73.96599	77.33704	17.82253	13.02994
661	74.21121	77.34194	17.77954	13.09993
662	74.08581	77.4098	17.78639	12.94967
663	73.90834	77.52404	17.88022	12.94063
664	74.08688	77.78824	17.88057	13.0939
665	74.17526	77.64726	17.69756	13.03083
666	74.00775	77.21661	17.76712	13.01208
667	73.99779	77.48701	17.97155	13.0027
668	73.79599	77.48327	17.86392	12.99812
669		77.17176	17.95377	13.05684
670		77.57555	17.79539	12.93248
671		77.21171	18.02549	13.13409
672		77.57087	17.96049	13.11321
673		77.5829	17.98968	13.01855
674		77.37091	17.96756	12.9192
675		77.5815	18.16721	13.00203
676		77.60148	17.92344	13.04914
677		77.44917	18.03677	13.07012
678		77.5224	17.99801	13.09066
679		77.45407	17.87509	13.00515
680		77.25855	18.13552	13.03072
681		77.83122	18.04133	13.00303
682		77.55312	17.93222	13.12393
683		77.55219	18.05388	12.98261
684		77.31204	18.14167	13.03384
685		77.56468	18.17508	13.19426
686		77.71676	17.93495	13.22942

687		77.4814	18.06049	13.15016
688		77.68522	18.11066	13.04791
689		77.45804	17.90041	13.13074
690		77.34463	18.16516	13.15697
691		77.61012	17.97315	13.08006
692		77.27712	18.09823	13.10138
693		77.50745	18.29218	13.15842
694		77.45828	18.13038	13.10752
695		77.64446	18.19059	12.9442
696		77.05648	18.03324	13.1217
697		77.3771	18.25056	13.10864
698		77.69842	18.11328	13.21111
699		77.66502	18.07634	13.14938
700		77.57473	18.19458	13.13353
701		77.61292	18.18044	13.09971
702		77.51107	18.07771	13.36505
703			18.29127	13.20207
704			18.47986	13.18611
705			18.32935	13.03786
706			18.19481	13.08553
707			18.09994	13.02692
708			18.03917	13.28513
709			18.20051	13.15273
710			18.22935	13.21413
711			18.22628	13.3118
712			18.19287	13.30276
713			18.18363	13.14871
714			18.26367	13.16881
715			18.27439	13.11087
716			18.26276	13.13085
717			18.15125	13.21502
718			18.03039	13.28825
719			18.15262	13.17952

720			18.28728	13.21134
721			18.29651	13.34563
722			18.22114	13.32152
723			18.381	13.27798
724			18.16733	13.28479
725			18.16459	13.30834
726			18.23312	13.29394
727			18.38522	13.42299
728			18.23642	13.35858
729			18.21636	13.29618
730			18.36196	13.36327
731			18.3094	13.40334
732			18.30712	13.3242
733			18.24714	13.42053
734			18.32639	13.31337
735			18.24383	13.34016
736			18.13951	13.34652
737			18.37211	13.40658
738			18.22742	13.27731
739			18.1972	13.54322
740			18.15764	13.43672
741			18.26573	13.41127
742			18.35421	13.27787
743			18.39354	13.34596
744			18.22263	13.18901
745			18.35991	13.30444
746			18.47176	13.24762
747			18.38693	13.32096
748			18.24543	13.40524
749			18.50836	13.36784
750			18.52102	13.51631
751				13.42131
752				13.49934

753				13.2235
754				13.37856
755				13.38716
756				13.52658
757				13.4989
758				13.23511
759				13.5882
760				13.47825
761				13.45246
762				13.34395
763				13.31538
764				13.47244
765				13.35981
766				13.40814
767				13.40546
768				13.42265
769				13.62303
770				13.55683
771				13.58441
772				13.48952
773				13.45581
774				13.30812
775				13.50883
776				13.5344
777				13.42556
778				13.37476
779				13.55695
780				13.47959
781				13.5287
782				13.4557
783				13.57146
784				13.38917
785				13.41283

786				13.49923
787				13.56655
788				13.44442
789				13.43795
790				13.54779
791				13.46507
792				13.40747
793				13.50403
794				13.36338
795				13.54478
796				13.47356
797				13.36851
798				13.32487
799				13.44197
800				13.56644
801				13.53496
802				13.50113
803				13.51832
804				13.30689
805				13.43962
806				13.59122
807				13.43092
808				13.40736
809				13.50348
810				13.3905
811				13.46373
812				13.4586
813				13.48182
814				13.57369
815				13.50627
816				13.3818
817				13.59769
818				13.52491

819				13.54936
820				13.57269
821				13.39196
822				13.55293
823				13.49912
824				13.47512
825				13.50615
826				13.65094
827				13.3818
828				13.63509
829				13.51408
830				13.43728
831				13.70129
832				13.39888
833				13.4874
834				13.68063
835				13.60093
836				13.60673
837				13.53629
838				13.40691
839				13.5277
840				13.69001
841				13.53696
842				13.57894
843				13.66445
844				13.41685
845				13.55695
846				13.66847
847				13.4202
848				13.56309
849				13.41741
850				13.47222
851				13.60093

852				13.55505
853				13.53216
854				13.49823
855				13.6333
856				13.59825
857				13.88001
858				13.5584
859				13.55739
860				13.47467
861				13.62169
862				13.44532
863				13.39731
864				13.47322
865				13.55047
866				13.6448
867				13.58418
868				13.63185
869				13.5517
870				13.63665
871				13.54668
872				13.79852
873				13.60964
874				13.56577
875				13.58887
876				13.57559

Table Apx. 2. 7: Time course of percent vesicle fusion of all constructs at pH 8.4 in lipid:protein 100:1.

Time (s)	FPHM	G10V	L9R	V2E
1	0.70887	1.0105	-4.09925	1.28938
2	1.48723	1.55453	-3.92552	1.36271
3	1.67008	2.36741	-3.80729	1.29814

4	1.69469	2.72344	-3.88226	1.48391
5	2.18808	3.5088	-3.8467	1.44773
6	2.50742	3.99462	-3.70786	1.41009
7	3.03213	4.72081	-4.1561	1.61192
8	2.98802	5.32937	-4.12507	1.71559
9	3.3	6.02305	-3.99551	1.73409
10	3.59025	6.60921	-4.02496	2.08096
11	3.88897	7.58147	-3.67661	1.95912
12	3.81257	8.13841	-3.84444	1.9794
13	4.12967	8.9312	-3.85939	2.00649
14	4.51294	9.73312	-3.8424	0.98404
15	4.45412	10.50496	-3.61749	1.32945
16	4.53436	11.11925	-4.16923	1.73928
17	4.69898	11.69579	-3.73164	1.9523
18	5.02886	12.24481	-3.75588	2.05727
19	5.00984	12.7858	-4.19732	2.31719
20	5.12748	13.544	-3.97422	2.53281
21	5.49013	13.6464	-3.67615	2.43692
22	5.35523	14.03202	-3.87252	2.65903
23	5.65235	14.31707	-4.04647	2.92203
24	5.5913	14.76381	-4.18962	2.86005
25	5.649	14.8572	-4.10831	3.13879
26	5.79284	15.0648	-4.03175	3.07356
27	5.80835	15.36458	-4.00729	3.08005
28	6.06679	15.85053	-4.07728	3.26371
29	6.04233	15.82338	-4.09857	3.24522
30	6.07845	16.00882	-4.10287	3.37777
31	6.33897	16.27231	-3.8082	3.50335
32	6.36343	16.43742	-4.32438	3.5783
33	6.42896	16.68033	-4.20049	3.72173
34	6.49561	16.80903	-3.76132	3.79603
35	6.73231	17.0293	-3.9441	4.02901

36	6.56801	17.07874	-4.01046	3.87975
37	6.57488	17.21815	-3.79212	4.21624
38	6.70578	17.4568	-3.9065	4.26589
39	7.0558	17.62021	-4.02111	4.27481
40	6.93513	17.79822	-3.9971	4.38773
41	6.89374	17.93959	-3.97966	4.44241
42	7.07211	18.1338	-4.06074	4.4111
43	7.15346	18.12954	-3.82247	4.71595
44	6.8776	18.03359	-4.16969	4.70768
45	6.91388	18.33446	-3.96403	4.66793
46	7.16289	18.53914	-4.0125	4.76884
47	7.31616	18.51613	-4.04964	4.84542
48	7.45042	18.80142	-3.66687	4.91843
49	7.07147	18.92975	-3.668	5.08392
50	7.23689	18.90942	-3.90469	5.08522
51	7.52202	18.97846	-3.75044	5.07532
52	7.31904	19.27933	-3.89517	5.45367
53	7.14195	19.02217	-3.96018	5.24
54	7.57221	19.273	-4.12733	5.50786
55	7.51483	19.4375	-3.67117	5.64447
56	7.54951	19.39805	-4.32302	5.83965
57	7.5647	19.45771	-3.9253	5.7105
58	7.50972	19.64145	-3.88906	5.67919
59	7.4883	19.64023	-4.01907	5.90454
60	7.40295	19.78135	-3.94274	5.93553
61	7.51019	19.83967	-3.839	5.96036
62	7.47343	19.86074	-4.03945	5.94851
63	7.86757	19.88168	-4.05553	5.79681
64	7.85814	20.02426	-3.96335	6.15537
65	7.60513	19.93781	-4.35904	6.14353
66	7.74E+00	20.03035	-4.04058	6.35201
67	8.28E+00	20.21373	-4.10287	6.42875

68	7.58E+00	20.23309	-4.3801	6.46688
69	7.68009	20.26121	-3.91737	6.20843
70	7.91504	20.37372	-3.71806	6.46396
71	7.49293	20.39345	-3.99823	6.47353
72	7.80364	20.32465	-3.97218	6.68607
73	7.75106	20.34316	-4.03402	6.7865
74	8.14663	20.49402	-4.17807	6.83322
75	7.95691	20.54382	-3.88498	6.63529
76	7.83241	20.72768	-3.89427	6.92229
77	7.88707	20.65962	-4.09743	6.71949
78	7.96235	20.70211	-3.88136	6.94566
79	7.94764	20.74801	-3.81794	6.9158
80	8.07966	20.65328	-3.93436	7.19795
81	8.09229	20.833	-3.96063	7.1152
82	7.97418	21.06593	-3.83289	7.13013
83	8.3389	20.85882	-4.12892	7.18075
84	8.06991	20.92128	-4.17761	7.14051
85	8.07886	20.96085	-3.88521	7.42168
86	8.36272	20.99178	-4.13684	7.44618
87	8.40459	20.90837	-4.00616	7.46922
88	8.11067	21.09601	-4.16652	7.31492
89	8.21967	21.13692	-4.13775	7.50669
90	8.30422	21.22106	-4.06573	7.465
91	8.37678	21.06995	-4.02337	7.5591
92	8.27929	21.22483	-4.05916	7.50458
93	8.19698	21.12048	-4.26867	7.6665
94	8.57497	21.31774	-4.16901	7.48382
95	8.4901	21.16967	-4.09132	7.91522
96	8.23486	21.38982	-4.00616	7.94378
97	8.48099	21.34355	-3.90876	7.84189
98	8.24269	21.25138	-3.81681	7.96682
99	8.37518	21.60497	-3.88249	7.98547

100	8.46245	21.46641	-4.16244	7.77456
101	8.63043	21.31798	-4.09676	7.97055
102	8.61908	21.24711	-4.20389	8.16362
103	8.76277	21.48345	-4.08588	8.34452
104	8.81391	21.49307	-4.06346	8.28238
105	8.72217	21.72698	-3.99846	8.2475
106	8.96895	21.62141	-3.84104	8.36334
107	8.7332	21.56869	-3.65758	8.25171
108	8.71642	21.74707	-3.98555	8.30071
109	8.74758	21.68387	-3.85554	8.3304
110	8.79873	21.69203	-3.92507	8.27848
111	9.00587	21.86359	-4.14885	8.55738
112	8.75605	21.86177	-4.00344	8.51357
113	8.59974	21.81513	-4.02043	8.44413
114	8.86042	21.89026	-3.80775	8.54327
115	8.97422	21.82633	-3.7441	8.74493
116	8.96111	21.87772	-4.14183	8.54927
117	9.18152	21.80088	-4.07592	8.46766
118	8.95025	21.86724	-4.14613	8.75353
119	8.91013	21.7579	-3.88747	8.95277
120	8.77236	21.97159	-3.91329	8.97727
121	8.72105	21.76594	-4.02903	8.80074
122	8.80384	22.16361	-4.03447	8.77933
123	8.83613	21.82792	-4.19936	8.82638
124	8.76804	22.02967	-4.1681	8.99041
125	9.10624	21.79236	-4.22178	8.822
126	8.77076	22.04465	-3.83017	8.79766
127	8.74854	21.8972	-4.07071	8.85299
128	9.09777	22.21865	-4.11895	9.08516
129	9.00714	21.98608	-4.11261	8.89647
130	8.97E+00	22.09591	-3.84806	8.98148
131	9.12E+00	22.12416	-3.87909	9.19451

132	9.02E+00	22.20184	-4.20004	9.15054
133	8.82E+00	22.18845	-3.96992	8.99836
134	9.05E+00	22.1076	-3.86867	9.54966
135	9.20E+00	22.13682	-4.00095	8.90344
136	8.89E+00	22.2234	-4.07501	9.25924
137	9.25E+00	22.19162	-4.05916	9.23539
138	8.90E+00	22.29682	-4.05553	9.31035
139	9.01E+00	22.10931	-4.08724	9.28277
140	8.99E+00	22.16495	-3.93617	9.26184
141	9.05E+00	22.28854	-3.90627	9.60158
142	9.13E+00	22.33286	-4.25055	9.54284
143	9.13E+00	22.30778	-3.86392	9.47762
144	9.10E+00	22.40993	-4.15995	9.51607
145	9.29E+00	22.1339	-3.9937	9.69584
146	9.23E+00	22.35539	-3.76109	9.27303
147	9.12E+00	22.30522	-3.8732	9.82012
148	9.15E+00	22.45073	-3.85282	9.76609
149	9.10032	22.27989	-3.88906	9.65366
150	9.15786	22.2805	-3.84489	9.6947
151	9.02025	22.41103	-4.00163	9.5641
152	9.23106	22.2497	-3.96516	9.90935
153	9.19654	22.34443	-4.06414	9.42278
154	9.08019	22.57078	-3.91171	9.72472
155	9.19926	22.34053	-3.93481	9.69681
156	9.20453	22.34382	-4.11284	10.17689
157	9.07891	22.44488	-3.98872	10.2353
158	9.12382	22.44866	-3.85894	10.53009
159	9.13613	22.60524	-4.10559	10.38602
160	9.32281	22.5295	-3.95633	9.9371
161	9.10752	22.46059	-3.87683	10.33427
162	9.25328	22.44512	-4.09381	10.24812
163	9.41567	22.59282	-3.83651	10.28284

164	8.83821	22.55179	-3.82202	10.35617
165	9.1593	22.65321	-3.94636	10.31269
166	9.11183	22.69948	-3.91941	10.12578
167	9.10864	22.57955	-4.06233	10.12254
168	9.1088	22.54265	-4.11601	10.06332
169	9.17976	22.51562	-4.16017	10.39332
170	9.1999	22.54241	-3.99393	10.28527
171	9.27166	22.60536	-3.90197	10.33313
172	9.26878	22.5289	-4.23288	10.30766
173	9.40767	22.36318	-4.0347	10.20415
174	9.15786	22.66429	-4.0245	10.20561
175	9.3113	22.72725	-4.15678	10.41636
176	9.32968	22.69266	-3.8757	10.32989
177	9.26223	22.77778	-3.83561	10.48321
178	9.28716	22.73053	-4.13413	10.29241
179	9.24257	22.57273	-4.13254	10.34287
180	9.02808	22.6386	-4.29562	10.45141
181	9.37155	22.63203	-4.23831	10.31512
182	9.40496	22.69632	-4.145	10.34919
183	9.22259	22.62509	-4.15859	10.387
184	9.27981	22.65942	-3.80571	10.70807
185	9.0666	22.60354	-4.2476	10.6495
186	9.49766	22.87117	-4.06663	11.57364
187	9.36692	22.74393	-4.21385	10.61527
188	9.24417	22.67209	-3.7253	10.46568
189	9.1975	22.98136	-3.88317	10.53902
190	9.36244	22.80602	-4.1031	10.50884
191	9.37059	22.74173	-4.06165	10.57714
192	9.5512	22.92547	-3.99642	10.60391
193	9.43916	22.79263	-4.11102	10.69704
194	9.43964	22.92024	-4.07229	10.70191
195	9.12302	22.94958	-4.10083	10.38975

196	9.29356	22.93339	-4.15315	10.90195
197	9.45802	22.84803	-3.88113	10.70791
198	9.42366	23.04857	-3.94908	10.70304
199	9.4358	22.92572	-4.11759	10.61835
200	9.3057	22.93826	-4.01703	10.93181
201	9.52355	22.94995	-4.00502	10.75399
202	9.20469	23.00778	-4.13322	10.46617
203	9.14092	22.88748	-3.98804	10.84533
204	9.27182	22.80055	-3.94636	10.79114
205	9.38658	22.94435	-3.99891	10.86415
206	9.36164	23.00316	-4.24488	10.86074
207	9.38658	23.04833	-4.12099	10.76746
208	9.31497	23.00985	-4.4639	10.92759
209	9.40528	22.91841	-4.08203	10.96263
210	9.31401	22.97576	-4.33276	11.02753
211	9.3837	23.15122	-4.1493	11.16154
212	9.24001	23.15536	-3.83493	10.97221
213	9.50021	23.16023	-4.20955	11.08204
214	9.47176	23.13612	-4.05508	11.2253
215	9.40847	23.14781	-4.15021	11.12991
216	9.44683	23.08047	-4.02337	11.3319
217	9.50373	23.00389	-4.01907	10.91039
218	9.54113	23.13977	-3.93957	11.25921
219	9.45738	23.09679	-4.16742	11.02396
220	9.46889	23.17374	-3.98894	11.0397
221	9.78679	23.17021	-3.95542	11.07231
222	9.67347	23.08328	-4.28792	11.25013
223	9.33271	23.34555	-4.05553	11.07669
224	9.61161	23.17959	-4.1305	11.17225
225	9.53713	23.35115	-3.75226	11.37522
226	9.58812	23.1254	-4.01544	11.22482
227	9.44124	23.17082	-4.03696	11.19091

228	9.47976	23.22147	-4.26459	11.24948
229	9.696	23.29867	-4.18962	11.50079
230	9.56047	23.09862	-4.34613	11.29815
231	9.69808	23.22391	-4.0732	11.35526
232	9.63303	23.26433	-3.90016	11.44709
233	9.72797	23.12382	-4.00638	11.59652
234	9.52914	23.37745	-3.85259	11.27739
235	9.69712	23.2664	-4.24171	11.42632
236	9.68977	23.37745	-4.01227	11.44028
237	9.83138	23.2899	-3.945	11.55709
238	9.63639	23.3464	-4.10627	11.51491
239	9.56526	23.26068	-4.0612	11.4247
240	9.82546	23.41422	-4.01929	11.26311
241	9.6423	23.45343	-4.13164	11.56715
242	9.67826	23.25995	-4.13096	11.37473
243	9.56127	23.27615	-3.87117	11.52075
244	9.73021	23.44028	-3.95474	11.30902
245	9.60938	23.33118	-4.20683	11.46137
246	9.63479	23.36406	-4.04806	11.40231
247	9.57358	23.50518	-4.15293	11.5837
248	9.36995	23.49921	-3.88861	11.22936
249	9.35493	23.45672	-4.18577	11.76444
250	9.78359	23.39097	-4.14364	11.85481
251	9.38674	23.47583	-4.0544	11.38609
252	9.60107	23.512	-3.89563	11.60495
253	9.81859	23.5277	-4.12892	11.39891
254	9.85967	23.44929	-4.07071	11.61599
255	9.53362	23.51967	-4.13186	11.6572
256	9.7406	23.5937	-4.12416	11.36613
257	9.77895	23.50226	-4.14862	11.70425
258	9.70431	23.50688	-3.98713	11.61144
259	9.56974	23.2815	-3.98849	11.88353

260	9.72493	23.5327	-4.3083	11.63432
261	9.72733	23.59565	-4.16901	11.9296
262	9.83793	23.51796	-3.99529	11.88028
263	9.72381	23.54719	-4.11669	11.61307
264	9.70112	23.50104	-4.18486	11.83696
265	9.77432	23.54792	-3.96607	11.79559
266	9.5277	23.66846	-4.13118	11.59911
267	9.57901	23.63583	-3.83244	12.0946
268	9.69744	23.59346	-4.18396	11.72404
269	9.91641	23.44588	-4.14205	11.74984
270	9.71454	23.62536	-3.92417	12.0714
271	9.88108	23.59504	-3.84874	11.74497
272	9.813	23.64764	-3.79099	11.81879
273	9.66308	23.71022	-3.89449	11.73459
274	9.69664	23.74018	-4.14636	12.23673
275	9.72765	23.53331	-4.15315	12.00797
276	9.79861	23.50384	-4.32121	12.09103
277	9.80357	23.6944	-4.32031	12.01624
278	9.70415	23.76209	-4.21725	12.63812
279	9.69824	23.54901	-4.49924	11.86211
280	9.83521	23.6407	-4.06482	12.28151
281	9.98082	23.50871	-4.07229	11.88466
282	9.74763	23.63291	-4.14002	11.77304
283	9.93287	23.67808	-4.11601	12.23494
284	9.86526	23.75004	-4.04919	11.8149
285	9.84097	23.6905	-4.14658	12.18952
286	9.72605	23.76465	-4.19234	12.07805
287	9.74108	23.58664	-3.87977	12.13533
288	9.74379	23.81652	-4.14636	12.22375
289	9.83186	23.72447	-4.03017	12.03847
290	9.98481	23.90151	-4.22699	12.00732
291	10.37383	23.8886	-4.0612	12.30422

292	10.28753	23.74541	-4.2553	12.23137
293	10.31166	23.8052	-4.27795	12.04739
294	10.36009	23.62889	-4.31261	12.00018
295	10.19147	23.81031	-4.18713	12.46127
296	10.45119	23.93159	-3.99347	11.84118
297	10.39909	23.93232	-4.26323	12.08114
298	10.37623	23.8757	-4.17693	12.14165
299	10.6254	23.84721	-4.12484	12.41584
300	10.38438	24.02291	-4.37081	12.09055
301	10.22232	23.75089	-4.09268	12.05664
302	10.35162	23.83357	-4.09404	12.13906
303	10.44112	23.95837	-4.3117	12.35614
304	10.37399	23.82212	-4.26255	12.16015
305	10.20506	23.93682	-4.29879	12.57257
306	10.41347	23.69707	-4.44239	12.19081
307	10.45551	23.78559	-4.24919	12.20639
308	10.60303	23.84027	-4.01839	12.07189
309	10.44288	23.95484	-4.26255	12.26593
310	10.38886	23.85074	-4.36991	12.01997
311	10.29792	23.81774	-4.16561	12.33537
312	10.52008	24.15624	-3.72236	12.19146
313	10.38167	23.71631	-4.2963	12.40368
314	10.34778	23.9367	-4.33118	12.38794
315	10.39413	23.83637	-4.23831	12.45851
316	10.35322	23.72934	-4.25598	12.32061
317	10.52407	23.89567	-3.99302	12.34559
318	10.39573	23.92879	-4.23696	12.30844
319	10.49083	23.95643	-4.57353	12.23462
320	10.66376	23.99405	-4.23107	12.59155
321	10.58209	23.8466	-4.36991	12.51692
322	10.46797	23.88909	-4.47432	12.60599
323	10.65146	23.99162	-4.24556	12.43937

324	10.75806	24.06796	-4.41249	12.54158
325	10.52519	24.05262	-4.38803	12.43499
326	10.38758	23.93487	-4.37466	12.52925
327	10.37863	24.10364	-4.33208	12.52731
328	10.57426	23.89104	-4.38576	12.41941
329	10.62237	24.21931	-4.10763	12.42444
330	10.37943	24.09243	-4.21929	12.37788
331	10.45519	24.15234	-4.45281	12.35257
332	10.47596	24.11435	-4.16923	12.42542
333	10.39957	24.05797	-3.93821	12.44164
334	10.38598	24.01621	-4.33888	12.54272
335	10.36856	24.30296	-4.11918	12.77116
336	10.4798	24.1991	-4.22087	12.83119
337	10.46014	24.15904	-4.07501	12.58539
338	10.53206	24.14016	-4.32144	12.60794
339	10.53206	24.03423	-4.39029	12.75299
340	10.24709	24.05408	-4.10061	12.59934
341	10.48827	24.02632	-4.33299	12.60015
342	10.45039	24.17511	-4.04511	12.5445
343	10.38279	24.20397	-4.00978	12.73595
344	10.67783	24.24646	-4.0322	12.63211
345	10.33739	24.17219	-4.25372	12.79387
346	10.52631	24.10437	-4.02111	12.80555
347	10.46382	24.08257	-4.06708	12.60875
348	10.46781	24.27483	-4.32348	12.5458
349	10.18252	24.15027	-3.93345	12.67235
350	10.19003	24.165	-4.12552	12.60794
351	10.38806	24.29383	-4.26799	12.99846
352	10.48987	24.24951	-4.27319	12.58003
353	10.59088	24.10376	-4.28769	12.77294
354	10.38806	24.24658	-4.33956	12.70983
355	10.179	24.17694	-4.40864	12.673

356	10.631	24.46368	-4.25666	12.75769
357	10.43073	24.12628	-3.79121	12.65661
358	10.38502	24.12543	-3.8612	12.61621
359	10.46414	24.15283	-4.33231	12.82324
360	10.23351	24.23636	-4.07071	12.89397
361	10.553	24.25133	-4.55382	12.87954
362	10.3131	24.32061	-4.24851	13.00479
363	10.38135	24.27483	-4.0467	12.7989
364	10.5952	24.29492	-4.27863	12.85212
365	10.34826	24.32001	-4.22744	12.69928
366	10.09382	24.26607	-4.46775	12.82827
367	9.94038	24.07027	-4.20049	12.87126
368	10.34682	24.4811	-4.49856	12.90582
369	10.26979	24.34022	-4.10627	12.77684
370	10.55652	24.34022	-4.17625	12.9811
371	10.36488	24.4912	-3.9441	12.81658
372	10.26132	24.23148	-4.2784	12.95693
373	10.24086	24.51044	-4.35315	12.67186
374	10.27314	24.33157	-4.24737	12.86088
375	10.25636	24.24135	-4.38418	12.79598
376	10.31614	24.50594	-4.40841	13.02637
377	10.40868	24.40402	-4.17807	12.83102
378	10.45103	23.97006	-4.26187	13.06433
379	10.36616	24.40451	-4.25462	13.14578
380	10.34171	24.39367	-4.41883	12.78462
381	10.36105	24.34131	-4.34975	12.77489
382	10.60734	24.36798	-4.1647	12.88505
383	10.35817	24.33778	-4.04376	12.96082
384	10.47293	24.27264	-3.98532	12.79209
385	10.24326	24.51982	-4.2134	12.88148
386	10.36025	24.2875	-4.0501	13.20191
387	10.21513	24.51555	-4.20593	13.17092

388	10.59679	24.35994	-4.24692	12.99051
389	10.51209	24.55293	-4.29584	13.02036
390	10.51624	24.55367	-4.26821	13.18017
391	10.4651	24.47647	-4.41272	13.22495
392	10.44608	24.54721	-4.28203	12.91961
393	10.34379	24.41133	-4.21	12.96715
394	10.21129	24.49583	-4.34771	12.96082
395	10.39557	24.59019	-4.1459	13.10765
396	10.42306	24.50533	-4.33888	12.93194
397	10.23622	24.6613	-4.19256	12.99862
398	10.37367	24.43556	-4.20661	12.68063
399	10.50969	24.44554	-4.17943	13.26843
400	10.53238	24.50703	-4.26006	13.33365
401	10.36952	24.57619	-4.19166	13.12939
402	10.7822	24.51178	-3.99619	13.23469
403	10.33532	24.51543	-3.88385	13.13523
404	10.5359	24.447	-4.24466	13.14448
405	10.54086	24.64754	-4.15814	12.93372
406	10.61997	24.45626	-4.1946	13.24442
407	10.37208	24.60785	-4.30196	13.32116
408	10.56131	24.51421	-4.31668	13.25545
409	10.38199	24.62818	-4.25281	13.08526
410	10.62253	24.71987	-4.26255	13.23501
411	10.51384	24.59677	-3.96244	13.27005
412	10.72082	24.649	-3.98894	13.26389
413	10.65353	24.57169	-4.01771	13.31678
414	10.64315	24.66885	-3.79574	13.03626
415	10.43153	24.37236	-4.23107	13.31954
416	10.65146	24.63062	-4.19913	13.16589
417	10.89216	24.57814	-4.0245	13.52786
418	10.58049	24.58264	-4.28746	13.13491
419	10.23175	24.75201	-4.01431	13.04243

420	10.51848	24.70002	-4.06708	13.19769
421	10.44064	24.68748	-3.92167	13.388
422	10.50377	24.67324	-3.86618	13.48632
423	10.67287	24.81996	-4.53502	13.13653
424	10.64283	24.54137	-4.12212	13.29098
425	10.54006	24.7318	-3.86867	13.31013
426	10.81304	24.75981	-4.0766	13.27525
427	10.74256	24.75944	-3.91601	13.55252
428	10.70084	24.77965	-4.03583	13.34761
429	10.50074	24.74349	-4.00729	13.12128
430	10.4408	24.78392	-4.00729	13.51455
431	10.50793	24.57327	-4.09223	13.36708
432	10.62764	24.73205	-4.34454	13.61677
433	10.63739	24.70587	-3.94817	13.06904
434	10.58545	24.70124	-4.06663	13.43489
435	10.36456	24.69868	-4.22359	13.14999
436	10.64682	24.59299	-3.94002	13.34371
437	10.514	24.6417	-3.87841	13.46475
438	10.36712	24.6115	-4.26776	13.36221
439	10.32429	24.90872	-3.76222	13.27606
440	10.5522	24.89423	-4.2245	13.38833
441	10.57937	24.95414	-3.98351	13.56517
442	10.48811	24.81241	-4.10468	13.38638
443	10.47341	24.9886	-3.6372	13.36399
444	10.47724	24.94829	-3.75701	13.61271
445	10.32605	24.85734	-4.00095	13.28741
446	10.66264	24.73229	-4.13277	13.41137
447	10.63052	24.89204	-4.05553	13.57848
448	10.71011	24.75615	-4.15451	13.64873
449	10.69077	24.7922	-3.66053	13.39531
450	10.60047	24.87158	-4.03696	13.55333
451	10.56051	24.8325	-4.01726	13.54084

452	10.68134	24.92626	-3.9792	13.52169
453	10.66552	24.93417	-4.21657	13.33852
454	10.71251	24.88693	-4.04829	13.57426
455	10.76142	25.02159	-3.91873	13.51099
456	10.61837	25.15541	-3.86732	13.66171
457	10.59616	24.94476	-3.85984	13.48908
458	10.69749	24.94708	-3.80865	13.42126
459	10.5407	24.87512	-3.88045	13.44252
460	10.73601	24.94111	-3.91669	13.37405
461	10.50745	24.87682	-3.92258	13.59308
462	10.63228	24.87877	-3.71692	13.45193
463	10.44432	24.97338	-4.07999	13.7881
464	10.7221	24.93794	-3.97785	13.50271
465	10.74272	24.92345	-3.9561	13.41786
466	10.6139	24.97934	-4.11601	13.59843
467	10.86083	24.83335	-3.88317	13.61742
468	10.43809	24.93259	-3.77649	13.52624
469	10.60207	24.93892	-3.92892	13.78858
470	10.91357	24.98592	-4.06097	13.6377
471	10.6147	25.07602	-4.09177	13.64922
472	10.68278	24.88534	-3.85758	13.40439
473	10.76813	25.07286	-4.02903	13.82996
474	10.80074	24.86891	-3.94817	13.66025
475	10.79834	24.87158	-4.10695	13.52023
476	10.5204	24.90519	-3.93843	13.73894
477	10.75455	25.16759	-3.98487	13.73034
478	10.53143	25.04656	-3.94659	13.54473
479	10.68374	25.05228	-3.77491	13.67956
480	10.69477	24.92979	-3.92371	13.67469
481	10.69829	24.83688	-3.81318	13.84391
482	10.65513	24.88778	-3.92802	13.5947
483	10.64762	24.95755	-3.78419	13.44755

484	10.60575	25.04899	-3.99846	13.81324
485	10.7985	25.02074	-3.59144	13.72255
486	10.58768	25.04923	-3.90967	13.97727
487	10.87522	25.05776	-3.96335	13.93558
488	10.77356	24.90422	-3.74388	13.8113
489	10.85428	25.02537	-3.46891	13.68183
490	10.57458	25.20046	-3.78397	13.67761
491	10.70484	25.16503	-4.04693	13.71947
492	10.73361	25.08503	-3.49428	14.11291
493	10.58864	25.13349	-3.73663	13.712
494	10.79962	25.05228	-3.80933	13.72125
495	10.31246	25.07286	-3.68317	13.88934
496	9.9423	25.20034	-3.96788	13.68491
497	10.12147	24.90385	-3.61862	13.66155
498	10.05162	25.23431	-3.88249	13.95148
499	10.31789	25.06458	-4.07796	13.7623
500	10.22519	25.2029	-3.84036	13.73018
501	10.57841	25.22956	-3.9108	13.70308
502	10.26611	25.2214	-3.70696	13.77771
503	10.60958	25.21605	-3.93323	13.58367
504	10.53143	25.20643	-3.60594	13.72823
505	10.4846	25.28764	-3.88634	13.95715
506	10.75646	25.26585	-3.68068	13.82622
507	10.55044	24.8521	-3.91352	13.91448
508	10.28129	25.11133	-3.9484	13.90637
509	10.75854	25.20497	-3.7697	13.90102
510	10.81017	25.10524	-3.83493	13.83466
511	10.62173	25.20338	-3.86732	13.83693
512	10.66488	25.14616	-3.77649	13.76798
513	10.70915	25.19011	-3.80254	13.86257
514	10.73824	25.06312	-3.83764	13.98717
515	10.62333	25.20107	-3.8646	14.10269

516	10.76398	25.36898	-3.90491	13.97646
517	10.79434	25.06616	-3.8159	13.84439
518	10.78587	25.0692	-3.74954	13.74721
519	10.70276	25.17903	-4.06255	13.99155
520	10.71619	25.27632	-3.58533	13.87019
521	10.74016	25.30944	-3.50221	13.85916
522	10.93052	25.18585	-3.54592	14.04931
523	10.98502	25.13459	-3.33143	14.00891
524	10.75167	25.27486	-3.69427	14.01718
525	10.86435	25.30031	-4.10808	13.89226
526	10.65593	25.32709	-3.80435	13.79377
527	10.59759	25.3165	-3.72983	13.98392
528	10.79386	25.33184	-4.21589	14.16207
529	10.70915	25.232	-3.56766	14.29397
530	10.73089	25.1755	-3.92915	13.51374
531	10.69477	25.19267	-4.00457	12.67511
532	10.7392	25.19961	-3.91896	13.03626
533	10.95577	25.26146	-3.66551	13.17952
534	10.77149	25.32661	-3.73051	13.46426
535	10.87058	25.28898	-3.84104	13.47464
536	10.92796	25.34353	-3.9484	13.57978
537	10.89535	25.23358	-3.69042	13.71931
538	10.74096	25.13909	-3.8039	13.33382
539	10.93835	25.29556	-3.51783	13.70503
540	10.89152	25.37495	-3.50085	13.61044
541	10.7742	25.45214	-3.68295	13.63867
542	10.81752	25.23249	-3.26665	13.85867
543	10.923	25.37446	-3.5201	13.70649
544	10.88544	25.41854	-3.48839	13.68799
545	10.9238	25.27047	-3.36699	14.09522
546	10.94874	25.35839	-3.65509	13.94888
547	10.81176	25.53129	-3.75067	14.07089

548	11.03552	25.33976	-3.73935	13.84358
549	10.96264	25.50681	-3.92371	14.08241
550	10.83206	25.29471	-3.6082	13.78031
551	10.88544	25.33976	-3.63493	13.97305
552	10.78427	25.31906	-3.63403	14.34573
553	10.87841	25.40953	-3.6338	13.97581
554	10.95145	25.34341	-3.59847	14.08549
555	10.8888	25.45214	-3.50515	14.16564
556	10.89439	25.25452	-3.50424	14.11096
557	10.89312	25.4021	-3.40345	14.17959
558	10.63675	25.56234	-3.58125	14.15201
559	10.82759	25.37531	-3.75973	14.13708
560	10.9986	25.51692	-3.53527	13.96072
561	11.02721	25.58766	-3.28613	13.86857
562	11.03329	25.5554	-3.74229	14.07121
563	10.75119	25.30591	-3.53935	13.99625
564	11.0229	25.46456	-3.65147	14.19322
565	10.90287	25.42462	-3.67208	14.16028
566	11.11416	25.51144	-3.37877	14.01945
567	10.91901	25.60215	-3.46166	13.96786
568	11.14501	25.45884	-3.60594	14.32723
569	10.99589	25.48599	-3.47253	14.2857
570	11.09306	25.47905	-3.74931	14.02027
571	11.13206	25.40831	-3.6193	14.13416
572	11.01986	25.38225	-3.7663	14.08095
573	10.97127	25.55199	-3.83221	14.2758
574	11.04623	25.37836	-3.60322	13.90621
575	10.9986	25.49987	-3.36925	14.14665
576	10.92956	25.30079	-3.6381	13.9651
577	10.86786	25.48051	-3.61726	14.1903
578	10.9831	25.48246	-3.56653	14.2758
579	11.16754	25.46371	-3.67683	14.0764

580	10.63883	25.42341	-3.5654	14.38288
581	10.86147	25.47576	-3.61228	14.37266
582	10.9254	25.66242	-3.3842	14.22258
583	10.72242	25.53859	-3.68703	13.99625
584	10.9489	25.45665	-3.58986	14.07932
585	10.89056	25.54602	-3.40187	14.17667
586	10.63771	25.46359	-3.22883	13.97727
587	10.96712	25.47211	-3.26416	14.29348
588	10.89184	25.69165	-3.4295	13.97354
589	11.02082	25.5526	-3.77015	14.2221
590	11.10665	25.62419	-3.27027	14.20425
591	11.0766	25.53324	-3.55475	14.48152
592	10.97175	25.7647	-3.75407	14.29511
593	11.0969	25.69481	-3.50198	14.12735
594	10.857	25.50974	-3.62293	14.34767
595	10.89535	25.64185	-3.5398	14.24724
596	11.15412	25.60678	-3.44581	14.14179
597	10.90718	25.4793	-3.49858	14.09717
598	11.10473	25.5974	-3.44015	14.35952
599	11.13605	25.655	-3.60096	14.36065
600	11.10409	25.50182	-3.37831	14.43658
601	10.83398	25.48417	-3.48658	14.35303
602	10.85668	25.70979	-3.48907	14.45702
603	11.26248	25.59107	-3.59326	14.27158
604	10.93179	25.54809	-3.61998	14.28748
605	11.03696	25.51168	-3.64263	14.32399
606	11.24426	25.51887	-3.43697	14.14341
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608	10.89743	25.46785	-3.74365	14.24092
609	11.05582	25.38043	-3.58284	14.15931
610	11.02657	25.61689	-3.61772	14.39489
611	10.8522	25.69019	-3.36155	14.46903

612	11.12966	25.46858	-3.2141	14.19241
613	11.34335	25.68215	-3.72213	14.4567
614	11.08635	25.57403	-3.54864	14.30971
615	11.10952	25.74303	-3.69676	14.15752
616	10.7758	25.62236	-3.52803	14.40949
617	11.00388	25.78942	-3.41818	14.38726
618	10.95017	25.67667	-3.43426	14.14195
619	11.03169	25.5532	-3.52848	14.27255
620	10.93403	25.57987	-3.46891	14.20279
621	11.03105	25.51314	-3.34434	14.30744
622	10.9457	25.61603	-3.46823	14.33275
623	11.13238	25.58048	-3.43652	14.41387
624	10.97383	25.57123	-3.49632	14.24627
625	11.16546	25.7272	-3.50923	14.34637
626	10.93259	25.64988	-3.52938	14.31019
627	11.14628	25.69847	-3.40391	14.16061
628	10.99109	25.58596	-3.4714	14.20749
629	11.41639	25.68446	-3.51738	14.37963
630	11.23611	25.55905	-3.72326	14.13189
631	11.17713	25.84421	-3.38171	14.25876
632	10.9059	25.81402	-3.43652	14.34767
633	11.0237	25.75034	-3.53324	14.27937
634	10.86387	25.69238	-3.49224	14.42522
635	11.22524	25.6785	-3.3919	14.34686
636	10.98438	25.72099	-3.30651	14.35854
637	11.02306	25.7714	-3.62112	14.45086
638	11.25497	25.83569	-3.41908	14.27904
639	11.18193	25.76933	-3.14706	14.28975
640	11.08619	25.76349	-3.23789	14.15574
641	11.18512	25.86771	-3.50334	14.54009
642	11.13733	26.00092	-3.72304	14.31279
643	10.96903	25.81816	-3.37741	14.73462

644	11.12391	25.87612	-3.21116	14.47049
645	11.05982	25.7647	-3.56608	14.23978
646	11.41432	25.78236	-3.31376	14.40932
647	11.06253	25.85103	-3.45124	14.31879
648	11.03169	25.74559	-3.14706	14.53214
649	11.34751	25.94552	-3.3346	14.4322
650	11.08363	25.81536	-3.49382	14.60629
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652	11.15428	25.81816	-3.44581	14.4223
653	11.09066	25.81584	-3.64648	14.57416
654	11.18161	25.74778	-3.48454	14.50407
655	11.06253	25.80756	-3.52599	14.56037
656	11.23371	25.83898	-3.1876	14.23589
657	11.31458	25.76105	-3.35045	14.48055
658	11.07484	25.7977	-3.17515	14.30727
659	10.99045	25.96549	-3.32622	14.51641
660	11.11927	25.69299	-3.32509	15.20448
661	11.16482	25.88829	-3.41115	14.42555
662	11.05087	25.77152	-3.33505	14.46806
663	11.12375	25.94272	-3.12101	14.3493
664	11.2246	25.99739	-3.47638	14.5521
665	11.08747	25.72659	-3.29474	14.47049
666	11.0531	25.77091	-3.28998	14.5336
667	11.3149	25.80306	-3.18647	14.69341
668	11.27766	25.85943	-3.53595	14.34881
669	11.30803	25.91191	-3.31671	14.32545
670	11.24138	25.83386	-3.59099	14.4481
671	11.25944	25.87648	-3.61659	14.56881
672	11.28741	26.03903	-3.35589	14.52176
673	11.10713	25.76458	-3.48205	14.27272
674	11.32018	25.97961	-3.50719	14.4984
675	11.22955	25.89158	-3.5475	14.63825

676	11.14053	25.91216	-3.29179	14.36
677	11.17441	25.83983	-3.42271	14.42782
678	11.33936	25.93554	-3.33754	14.46595
679	11.16163	25.97499	-3.32848	14.66161
680	11.16898	26.0053	-3.62044	14.62559
681	11.20446	25.96281	-3.63267	14.56978
682	11.0961	25.90327	-3.21184	14.38109
683	11.21581	26.0551	-3.34117	15.70402
684	11.26376	25.67911	-3.24242	14.55372
685	11.38123	26.11513	-3.31104	14.72083
686	11.19136	26.02418	-3.2021	14.56475
687	11.2644	26.00092	-3.27095	14.56232
688	11.36045	25.93968	-3.45396	14.53214
689	11.20574	25.96439	-3.23403	14.52225
690	11.2441	26.0075	-3.07481	14.66697
691	11.42854	26.00336	-3.085	14.64101
692	11.36301	25.94528	-3.26665	14.41857
693	11.02961	25.97779	-3.10425	14.43545
694	11.38507	25.95721	-2.93936	14.45848
695	11.02497	26.04378	-3.35453	14.67735
696	11.7124	25.91216	-3.48205	14.7343
697	10.99477	26.04914	-3.4594	14.58455
698	11.23994	26.21851	-3.50424	14.61927
699	11.04687	25.87745	-3.56155	14.42458
700	11.49519	25.95977	-3.27979	14.58406
701	11.2572	25.86601	-3.24264	14.66307
702	11.36365	26.11538	-3.19576	14.5422
703	11.3165	26.04853	-3.22588	14.39537
704	11.1335	25.80683	-3.23449	14.64506
705	11.31155	25.99276	-3.23245	14.36844
706	11.37116	25.91508	-3.35453	14.47649
707	11.35342	25.85542	-3.41659	14.37314

708	11.19919	25.85201	-3.37967	14.39099
709	11.4287	25.99398	-3.30765	14.45248
710	11.01379	25.96062	-3.35725	14.44242
711	11.28118	26.14533	-3.14389	14.32123
712	11.32098	25.99861	-3.37605	14.50975
713	11.51053	26.10661	-3.32214	14.4958
714	11.31634	26.07361	-3.48635	14.28959
715	11.27207	26.0316	-2.95431	14.61862
716	11.37612	26.10953	-3.07481	14.51819
717	11.39578	26.15458	-3.10992	14.5336
718	11.4506	26.1502	-3.27299	14.63857
719	11.09993	26.1256	-3.45011	14.59428
720	11.51261	26.14618	-3.50175	14.44826
721	11.14644	25.88927	-3.1568	14.37704
722	11.41719	26.05072	-3.27752	14.38109
723	11.38475	26.06984	-3.39349	14.43317
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725	11.39945	26.22289	-3.36291	14.41143
726	11.56056	25.94881	-3.25487	14.45556
727	11.58118	26.25674	-3.02022	14.47974
728	11.37228	26.13425	-2.91762	14.47649
729	11.53946	26.11294	-3.44581	14.70266
730	11.36013	26.39141	-3.191	14.42912
731		26.04463	-3.16495	14.4223
732		26.01127	-3.64014	14.6707
733		26.00944	-3.43109	14.59558
734		26.27537	-3.40323	14.56962
735		26.03343	-3.22588	14.58487
736		26.10978	-3.40345	14.54674
737		26.12414	-3.32509	14.54707
738		26.17285	-3.1423	14.41468
739		26.13547	-3.25736	14.63874

740		26.10771	-3.21841	14.36795
741		26.05839	-2.93891	14.41127
742		26.0808	-3.02317	14.42701
743		26.16603	-3.29474	14.64149
744		26.15629	-3.21297	14.31766
745		26.31433	-3.2329	14.47682
746		26.11136	-3.10697	14.64669
747		26.17906	-3.20663	14.70801
748		26.19951	-3.15159	14.87772
749		26.31604	-3.23675	14.55015
750		26.22715	-3.19848	14.65772
751		26.18527	-3.1645	14.64993
752		26.25857	-3.08455	14.96403
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755		26.39433		14.69179
756		26.18454		14.57871
757		26.23665		14.67183
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760		26.41527		14.65009
761		26.17492		14.55729
762		26.39616		14.79465
763		26.44791		14.5229
764		26.54848		14.76415
765		26.36109		14.63663
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767		26.31421		14.69812
768		26.08749		14.84203
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770		26.2845		14.55632
771		26.13766		14.5925

772		26.26173		14.75799
773		26.34636		14.66599
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776		26.27342		14.76237
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782		26.313		14.69357
783		26.24566		14.70558
784		26.3533		14.78768
785		26.2705		14.59428
786		26.34064		14.80763
787		26.32188		14.80293
788		26.39372		14.6793
789		26.30934		14.77794
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792		26.19939		14.62073
793		26.36267		14.85598
794		26.34648		14.59006
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796		26.40505		14.6011
797		26.39652		14.64685
798		26.31446		14.68189
799		26.52583		14.68806
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801		26.63006		14.74939
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803		26.33029		15.08831

804		26.75414		14.6303
805		26.6493		15.0252
806		26.62178		14.75263
807		26.24006		14.64214
808		26.55372		14.77859
809		26.58976		14.62365
810		26.38471		14.92055
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812		26.44316		14.58228
813		26.39153		14.88762
814		26.55506		14.69357
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818		26.56553		14.71191
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828		26.48066		14.69406
829		26.37509		14.83894
830		26.34051		14.79692
831		26.61862		14.89476
832		26.5749		14.66745
833		26.35074		15.00249
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835		26.51244		14.68692

836		26.41406		14.91049
837		26.59122		14.88859
838		26.48529		15.06365
839		26.36085		14.86701
840		26.51329		14.91147
841		26.55713		14.88324
842		26.67097		14.87707
843		26.43488		14.88632
844		26.41893		14.79173
845		26.47908		14.99308
846		26.56541		14.7906
847		26.40273		14.87561
848		26.59901		
849		26.63335		
850		26.52912		
851		26.59573		
852		26.58209		
853		26.60547		
854		26.52559		
855		26.72211		
856		26.52242		
857		26.79407		
858		26.82074		
859		26.59597		
860		26.83499		
861		26.63773		
862		26.48797		
863		26.63006		
864		26.67463		
865		26.70896		
866		26.78653		
867		26.58464		

868		26.58063		
869		26.56005		
870		26.54312		
871		26.67317		
872		26.55481		
873		26.58525		
874		26.7198		
875		26.52364		
876		26.68924		
877		26.69228		
878		26.64674		
879		26.73088		
880		26.70726		
881		26.66428		

Table Apx. 2. 8: Time course of percent vesicle fusion of all constructs at pH 3.12 in lipid:protein 600:1.

Time (s)	FPHM	G10V	V2E	L9R
1	0.37211	6.55051	0.0315	0.54056
2	0.79523	7.99344	0.05965	0.48004
3	1.06057	9.20657	0.18301	0.39463
4	1.30526	10.69495	0.09867	0.5633
5	1.53563	10.76356	0.03128	0.45685
6	1.64758	11.37464	0.01591	0.52257
7	1.94743	11.91855	0.13299	0.51273
8	2.0625	12.21819	0.06032	0.47732
9	2.26437	12.54133	0.00212	0.53377
10	2.25063	12.61618	0.03531	0.44248
11	2.54194	12.92618	0.08869	0.6021
12	2.68241	13.20699	0.03453	0.53988
13	2.66117	13.4458	0.10641	0.5013
14	2.883	13.68184	0.02432	0.32879

15	3.13507	13.78443	0.04866	0.54825
16	3.20582	13.66123	0.0527	0.50866
17	3.31293	13.76226	0.06178	0.48807
18	3.3943	13.75379	0.12682	0.56884
19	3.51641	14.0473	0.04249	0.47902
20	3.55045	13.8859	0.08667	0.54214
21	3.75543	14.10244	0.16764	0.46465
22	3.84546	14.06891	0.21429	0.57121
23	4.0629	14.06969	0.12693	0.57121
24	4.11623	14.09297	0.0398	0.45911
25	3.94125	14.2253	0.0019	0.52676
26	4.3114	14.22764	0.02062	0.42981
27	4.13873	14.22597	0.12817	0.52302
28	4.45105	14.19233	0.18738	0.40244
29	4.41608	14.51525	0.07613	0.4263
30	4.75309	14.39796	0.00683	0.53445
31	4.71812	14.32388	0.05348	0.57212
32	4.74282	14.46446	0.28012	0.38728
33	4.7973	14.73056	0.18458	0.39633
34	4.85708	14.42369	0.04395	0.34881
35	4.95184	14.45666	0.16697	0.6323
36	5.22145	14.71062	0.17975	0.57597
37	5.17737	14.53374	0.09912	0.8573
38	5.06045	14.74438	0.06694	0.67461
39	5.27674	14.63176	0.06537	0.60741
40	5.29221	14.80074	0.11034	0.50741
41	5.27524	14.69202	0.14577	0.50436
42	5.48934	14.78191	0.28629	0.62257
43	5.5048	14.61639	0.19814	0.58943
44	5.70701	14.71708	0.0758	0.65549
45	5.79507	14.72143	0.11236	0.57993
46	5.76599	14.85476	0.11336	0.53705
47	5.85221	14.91313	0.32363	0.55606

48	5.98713	14.9197	0.22764	0.58796
49	6.0281	14.84262	0.15318	0.62382
50	6.00767	14.96816	0.10574	0.63309
51	6.09158	14.95122	0.25522	0.59361
52	6.1636	15.00012	0.00907	0.3978
53	6.19026	14.95312	0.07692	0.38716
54	6.28686	15.17088	0.18816	0.3418
55	6.40378	14.99767	0.03083	0.40934
56	6.44314	14.96281	0.06683	0.32608
57	6.47615	14.96114	0.20061	0.31578
58	6.52231	14.6595	0.12839	0.35255
59	6.65574	14.73869	0.29818	0.4392
60	6.68205	14.76509	0.15632	0.37619
61	6.68713	14.84964	0.13512	0.23547
62	6.96032	14.88751	0.10361	0.40707
63	6.75661	15.03187	0.17089	0.59802
64	6.89E+00	14.99233	0.14858	0.45877
65	7.02E+00	15.16665	0.07154	0.53196
66	7.13E+00	15.15997	0.27765	0.39259
67	6.95363	15.15462	0.01681	0.49712
68	7.13206	15.06595	0.24894	0.50617
69	7.15387	15.26968	0.15194	0.36725
70	7.37594	15.20853	0.18615	0.55821
71	7.13829	15.14816	0.17818	0.57959
72	7.29099	15.36637	0.194	0.54983
73	7.29941	15.262	0.04238	0.65357
74	7.38159	15.35178	0.06122	0.45221
75	7.2881	15.15139	0.12783	0.68671
76	7.41956	15.24663	0.16013	0.53705
77	7.52713	15.27247	0.08264	0.38513
78	7.57872	15.40146	0.12772	0.39316
79	7.58045	15.55896	0.25208	0.40945
80	7.60065	15.46617	0.33653	0.56013

81	7.68906	15.38163	0.05909	0.59667
82	7.69356	15.34988	0.1442	0.56895
83	7.79432	15.31235	0.25444	0.57065
84	7.93836	15.30722	0.21283	0.57857
85	7.84002	15.44635	0.36075	0.58954
86	7.98337	15.51619	0.16226	0.56273
87	8.00184	15.59984	0.1894	0.59576
88	8.13295	15.54526	0.18379	0.46556
89	8.10871	15.52688	0.30535	0.56816
90	8.19828	15.55005	0.2735	0.54904
91	8.1228	15.4527	0.29055	0.67393
92	8.24895	15.76915	0.22248	0.60877
93	8.34855	16.20736	0.22562	0.56397
94	8.17012	15.60753	0.51786	0.53569
95	8.20797	15.66957	0.21844	0.51759
96	8.31554	15.7745	0.49016	0.46182
97	8.36782	15.48533	0.35761	0.69248
98	8.29153	15.76013	0.31511	0.58117
99	8.44134	15.67436	0.42265	0.44983
100	8.48105	15.7647	0.23179	0.58581
101	8.5054	15.63237	0.31275	0.5478
102	8.49109	15.72326	0.22741	0.51952
103	8.61862	15.753	0.24614	0.56273
104	8.61793	15.73729	0.26128	0.66839
105	8.72815	15.64295	0.31993	0.65934
106	8.6626	15.67068	0.38082	0.58253
107	8.55353	15.55551	0.39865	0.71432
108	8.68811	15.76848	0.24883	0.69757
109	8.81045	15.73819	0.32206	0.59305
110	8.78044	15.74721	0.40505	0.48298
111	8.83838	15.79243	0.36333	0.5504
112	9.00804	15.66511	0.33743	0.64588
113	8.83457	15.59327	0.40426	0.48106

114	8.69111	15.76826	0.39619	0.53241
115	8.88374	15.73885	0.25993	0.53321
116	8.98934	15.79098	0.13882	0.6073
117	9.13869	15.81237	0.4305	0.56341
118	8.95529	15.78319	0.25848	0.74452
119	9.21371	15.92019	0.32173	0.52732
120	9.18924	15.91763	0.2919	0.5513
121	9.15312	15.96275	0.5071	0.7073
122	9.31655	16.13406	0.43533	0.66918
123	9.30789	15.78397	0.46504	0.78649
124	9.25469	15.8029	0.40964	0.88875
125	9.19986	15.83832	0.4055	0.85866
126	9.37899	15.64963	0.35133	0.94022
127	9.29716	15.90995	0.33272	0.9038
128	9.30E+00	15.81504	0.5653	0.88083
129	9.39E+00	15.82407	0.28113	0.96353
130	9.27E+00	15.97444	0.32464	1.03095
131	9.45E+00	15.91708	0.40482	0.9685
132	9.44E+00	15.87397	0.33608	0.98638
133	9.45E+00	15.95116	0.39731	1.13072
134	9.55E+00	15.97778	0.29111	0.97043
135	9.57E+00	16.00084	0.36097	1.02982
136	9.58E+00	15.90438	0.5025	1.09237
137	9.46E+00	15.96397	0.45192	1.03479
138	9.62E+00	15.87909	0.39608	1.06703
139	9.64E+00	16.00485	0.44688	1.17789
140	9.56E+00	16.06032	0.30961	0.86126
141	9.75E+00	15.99137	0.41536	1.03807
142	9.79E+00	15.97377	0.45731	1.10527
143	9.72E+00	15.933	0.31993	1.04701
144	9.69E+00	16.22818	0.41312	1.06511
145	9.51E+00	15.94303	0.45439	1.25165
146	9.85E+00	16.13796	0.35716	1.02427

147	9.87586	16.00363	0.40953	1.01262
148	9.68	16.24879	0.31948	1.14407
149	9.71866	16.10555	0.36782	1.08196
150	9.72455	16.17895	0.33227	1.11896
151	9.93253	16.02379	0.5515	1.12755
152	9.98319	16.07837	0.32475	1.2185
153	9.96519	16.02746	0.43387	1.09203
154	10.01078	16.0709	0.3732	1.21104
155	9.97396	16.11301	0.35167	0.98445
156	9.97396	16.02813	0.58537	1.29701
157	9.90852	16.11435	0.51652	1.21251
158	9.96034	16.16414	0.53367	1.19645
159	9.95942	16.19143	0.49342	1.07303
160	10.00362	16.09597	0.37443	1.10187
161	9.98377	16.26238	0.36501	1.21896
162	10.16244	16.26706	0.52481	1.16602
163	10.18737	15.96742	0.42781	1.0478
164	10.0753	16.39048	0.47547	1.20131
165	10.14028	16.28533	0.26767	1.18163
166	10.17005	16.23888	0.38609	1.22574
167	10.1719	16.17204	0.41054	1.18117
168	10.35195	16.2919	0.47323	1.19701
169	10.45894	16.31874	0.35458	1.14294
170	10.25604	16.13896	0.29885	0.96002
171	10.3059	16.23041	0.46157	1.08479
172	10.32136	16.25091	0.56877	1.04825
173	10.2505	16.22741	0.49342	1.17902
174	10.34168	16.19911	0.44239	1.1159
175	10.39304	16.22896	0.48142	1.13355
176	10.19879	16.33322	0.56014	1.24102
177	10.30855	16.31919	0.49196	1.12721
178	10.36384	16.27341	0.4554	1.16138
179	10.4946	16.13284	0.6198	1.18649

180	10.32148	16.37522	0.48355	1.24068
181	10.49334	16.39148	0.48287	1.07993
182	10.4369	16.21916	0.48904	1.09373
183	10.40112	16.22507	0.55509	1.10617
184	10.34814	16.25637	0.509	1.00346
185	10.48075	16.45464	0.47805	1.11409
186	10.68481	16.22618	0.45091	0.99622
187	10.40077	16.40752	0.39159	1.01658
188	10.57563	16.30237	0.48164	0.97993
189	10.48503	16.29936	0.49712	1.01884
190	10.59583	16.28087	0.52818	1.21025
191	10.66242	16.41955	0.61543	1.21556
192	10.74033	16.4895	0.47996	1.05244
193	10.78338	16.34046	0.57842	1.09034
194	10.69439	16.31941	0.54724	1.43875
195	10.78026	16.38502	0.42265	1.40708
196	10.61868	16.48705	0.48826	1.54351
197	10.59144	16.34046	0.60062	1.32495
198	10.81569	16.3457	0.65625	1.43004
199	10.97312	16.57304	0.58212	1.44498
200	10.86463	16.55221	0.50889	1.23864
201	10.84016	16.56692	0.52818	1.33185
202	10.83024	16.45397	0.61251	1.39599
203	11.20661	16.49073	0.48287	1.47461
204	10.92869	16.51869	0.42164	1.34713
205	10.92384	16.42534	0.61251	1.38287
206	11.14371	16.43604	0.51371	1.40086
207	11.00959	16.46645	0.59244	1.34079
208	11.22208	16.63453	0.39708	1.28706
209	10.97174	16.46154	0.62159	1.38344
210	11.07827	16.74503	0.50003	1.3383
211	11.15917	16.5462	0.6281	1.45697
212	11.06903	16.5374	0.53782	1.45663

213	11.0733	16.61225	0.54545	1.31805
214	11.01144	16.64166	0.70525	1.42846
215	11.29467	16.59911	0.4379	1.33513
216	11.12466	16.49808	0.52022	1.29441
217	11.0995	16.5374	0.52212	1.43366
218	10.98212	16.42701	0.55139	1.46387
219	11.04572	16.42479	0.64761	1.34464
220	11.36161	16.61838	0.71994	1.26455
221	11.2492	16.50822	0.64111	1.37676
222	11.18226	16.63888	0.56182	1.13638
223	11.32791	16.62751	0.43936	1.26149
224	11.30125	16.47369	0.49801	1.44249
225	11.26282	16.46622	0.6549	1.26998
226	11.25485	16.49318	0.51921	1.27043
227	11.2664	16.5237	0.67632	1.32427
228	11.14359	16.67474	0.48601	1.52733
229	11.34626	16.59733	0.41335	1.37993
230	11.1025	16.74057	0.54937	1.27959
231	11.17002	16.54241	0.5986	1.27235
232	11.38747	16.60535	0.62496	1.17405
233	11.19761	16.55734	0.60679	1.13016
234	11.36	16.60356	0.63068	1.2452
235	11.29883	16.9022	0.60388	1.26624
236	11.34245	16.64857	0.59098	1.2564
237	11.41874	16.69011	0.68608	1.31884
238	11.34707	16.61482	0.64279	1.38717
239	11.22554	16.58797	0.65826	1.36794
240	11.48049	16.7594	0.61969	1.484
241	11.372	16.78725	0.61027	1.3728
242	11.31729	16.6362	0.62395	1.48887
243	11.39462	16.6577	0.6429	1.42326
244	11.35388	16.60858	0.63954	1.39848
245	11.39762	16.83135	0.60163	1.41104

246	11.31522	16.76586	0.69303	1.4443
247	11.61922	16.89897	0.57304	1.53762
248	11.38758	16.64277	0.60197	1.44894
249	11.22023	16.76341	0.65008	1.56545
250	11.52874	16.77811	0.69123	1.41296
251	11.50819	16.76107	0.73194	1.46228
252	11.43006	16.83592	0.69045	1.50505
253	11.51558	16.74815	0.61408	1.3443
254	11.43813	16.70159	0.63954	1.55165
255	11.52804	16.89997	0.67722	1.47054
256	11.57652	16.78914	0.69449	1.36647
257	11.3787	16.82278	0.49712	1.42631
258	11.5876	16.79304	0.67576	1.5271
259	11.55724	16.7232	0.64593	1.54419
260	11.40582	16.86756	0.56563	1.31568
261	11.55655	16.69936	0.75325	1.45357
262	11.46999	16.84283	0.52627	1.45504
263	11.44702	16.76096	0.69998	1.62054
264	11.54224	16.78669	0.6133	1.3995
265	11.66585	16.85686	0.65367	1.39611
266	11.62199	16.86856	0.74237	1.59192
267	11.68813	16.92793	0.72533	1.56149
268	11.5906	16.76842	0.72891	1.51251
269	11.58956	16.78736	0.57988	1.38796
270	11.61195	16.94219	0.76973	1.45527
271	11.75807	16.96614	0.82681	1.56138
272	11.57883	17.04745	0.55207	1.6219
273	11.56879	16.94731	0.74831	1.55109
274	11.60676	16.94731	0.77871	1.65029
275	11.54259	16.94609	0.7122	1.6021
276	11.56832	16.97694	0.69157	1.43152
277	11.51316	16.76942	0.75381	1.51025
278	11.71156	16.71874	0.79598	1.39814

279	11.56244	16.81855	0.74585	1.63344
280	11.72737	16.92492	0.73643	1.48808
281	11.72483	17.04489	0.77052	1.5831
282	11.61091	17.00189	0.65367	1.49362
283	11.82039	17.07663	0.78218	1.7107
284	11.70867	16.84116	0.88277	1.45652
285	11.73256	16.90487	0.59479	1.49192
286	11.76153	16.81197	0.56519	1.59645
287	11.72448	16.90443	0.64593	1.41523
288	11.76846	16.78145	0.76357	1.60335
289	11.62592	17.00601	0.78016	1.64656
290	11.64542	16.95767	0.78016	1.62756
291	11.78565	17.02918	0.74125	1.63502
292	11.51108	16.86332	0.73441	1.52484
293	11.73325	17.03742	0.82569	1.57009
294	11.76165	17.00122	0.71153	1.4357
295	11.76753	16.90231	0.81022	1.6081
296	11.83782	17.15895	0.65109	1.52891
297	11.83828	17.07931	0.72454	1.51059
298	11.75922	17.06572	0.71232	1.50821
299	11.7972	17.12286	0.84722	1.67439
300	11.84244	16.86132	0.65187	1.41726
301	11.88249	17.06427	0.71019	1.58434
302	11.83459	17.10002	0.68002	1.58491
303	11.63469	17.03386	0.67699	1.55991
304	11.80851	17.13723	0.60287	1.5926
305	11.92346	16.87446	0.82906	1.61206
306	11.73937	17.12564	0.69942	1.4495
307	11.78739	17.08855	0.60791	1.60437
308	11.89391	17.09947	0.76144	1.76036
309	11.83494	17.25764	0.73901	1.6021
310	11.93177	17.07552	0.78936	1.55833
311	12.13086	16.96313	0.82244	1.61183

312	11.91758	17.0411	0.72196	1.48491
313	11.77492	17.18602	0.75594	1.52473
314	11.89692	17.14046	0.89814	1.64905
315	11.83551	17.09356	0.85036	1.62654
316	12.09105	16.98218	0.7962	1.46489
317	12.00864	16.94419	0.71624	1.60539
318	12.03426	17.06004	0.67609	1.61613
319	11.85179	17.13255	0.79295	1.66229
320	11.99075	17.08387	0.72858	1.51443
321	11.96409	17.01849	0.75863	1.52133
322	11.91238	17.08833	0.79418	1.60267
323	12.06646	16.97995	0.63651	1.61183
324	11.95382	17.06572	0.68708	1.55946
325	11.95497	17.0783	0.94625	1.53932
326	12.07177	17.18869	0.82446	1.53559
327	12.00575	17.18401	0.76009	1.57801
328	11.9462	17.15026	0.75661	1.59079
329	11.84082	17.2211	0.77198	1.76726
330	12.05377	17.17499	0.83668	1.71319
331	11.93616	17.16118	0.91384	1.50629
332	12.01914	17.10682	0.71893	1.56817
333	12.09335	17.25575	0.76861	1.71783
334	11.96951	17.25185	0.83478	1.60471
335	11.9402	17.42584	0.83455	1.46557
336	11.9402	17.25708	0.82042	1.50572
337	11.96997	17.31434	0.7833	1.53627
338	12.11471	17.31122	0.84902	1.49498
339	12.09624	17.21988	0.77691	1.65052
340	12.09428	17.25218	0.762	1.62609
341	12.01753	17.30643	0.66645	1.68174
342	11.93246	17.07452	0.80012	1.61127
343	12.02664	17.20718	0.8193	1.65278
344	12.33504	17.2905	0.75336	1.59543

345	11.98198	17.21119	0.94456	1.67869
346	12.26382	17.24249	0.82266	1.60516
347	11.92715	17.38418	0.72129	1.59249
348	12.20265	17.32269	0.79575	1.64679
349	12.06565	17.23247	0.93582	1.60278
350	12.16907	17.08398	0.8054	1.53502
351	12.14691	17.12464	0.89309	1.63706
352	12.19319	17.14993	0.88333	1.68321
353	12.13941	17.15706	0.9477	1.53887
354	12.25598	17.35834	0.84532	1.57428
355	12.01095	17.1868	0.85754	1.57597
356	12.03922	17.3335	0.95544	1.65561
357	12.08389	17.40657	0.75616	1.54328
358	12.09255	17.20384	0.79115	1.67473
359	12.06138	17.17956	0.73127	1.63197
360	12.13306	17.34564	0.89814	1.74091
361	12.23289	17.43586	0.88614	1.68016
362	12.15314	17.28638	0.82053	1.65267
363	11.99583	17.5497	0.88031	1.64317
364	12.22574	17.41303	0.95825	1.80697
365	12.05838	17.42183	0.97933	1.84294
366	12.26994	17.28248	0.85507	1.67722
367	12.10363	17.26521	0.79261	1.79668
368	12.12809	17.32703	0.81683	1.74057
369	12.04269	17.18368	0.97765	1.64498
370	12.18615	17.2514	0.95903	1.61511
371	12.29233	17.29473	0.92886	1.63548
372	12.27652	17.33004	0.80012	1.75957
373	12.28368	17.36736	0.88961	1.82484
374	12.18338	17.44488	0.88692	1.66794
375	12.00979	17.31924	1.01566	1.68695
376	12.16445	17.25964	0.91215	1.85154
377	12.35685	17.18925	0.80629	1.5667

378	12.30641	17.42495	0.95892	1.59962
379	12.30976	17.44867	0.86618	1.69509
380	12.3108	17.28861	0.98	1.67609
381	12.31772	17.37192	0.8756	1.65358
382	12.48439	17.32937	0.81896	1.75471
383	12.49281	17.36636	0.96049	1.74147
384	12.26613	17.32703	0.91686	1.80969
385	12.22724	17.37326	1.02598	1.62586
386	12.50447	17.44778	0.87436	1.52088
387	12.45368	17.42016	0.82648	1.65878
388	12.44976	17.40178	0.89589	1.73627
389	12.28806	17.61152	0.93458	1.6538
390	12.23174	17.42183	0.88737	1.68536
391	12.337	17.30409	0.89096	1.54928
392	12.47515	17.39977	0.90453	1.73706
393	12.18823	17.50804	0.93268	1.71602
394	12.49708	17.26165	0.90049	1.80833
395	12.29706	17.6045	0.81033	1.70652
396	12.4186	17.5712	0.94109	1.73706
397	12.30168	17.37438	0.88311	1.83853
398	12.46511	17.48387	0.9504	1.66602
399	12.36031	17.08387	0.94288	1.76692
400	12.37739	17.46661	0.92303	1.79905
401	12.45438	17.44344	0.86348	1.65957
402	12.53471	17.42428	0.89702	1.84973
403	12.43591	17.44778	0.9652	1.7503
404	12.57926	17.52152	0.89556	1.85595
405	12.49143	17.48677	0.89679	1.73073
406	12.56114	17.55605	0.91036	1.70742
407	12.46753	17.48532	1.11446	1.72156
408	12.45796	17.48643	0.9033	1.77937
409	12.41317	17.48755	0.96094	1.79668
410	12.3475	17.51138	0.91933	1.79826

411	12.66651	17.58156	1.02564	1.57857
412	12.48208	17.42951	1.04437	1.67054
413	12.38397	17.30353	1.00591	1.92677
414	12.39632	17.50916	0.92101	1.59023
415	12.5384	17.42294	0.90543	1.82156
416	12.3632	17.64917	0.86416	1.70244
417	12.47619	17.62043	1.0179	1.7676
418	12.50666	17.42695	1.02519	1.76183
419	12.36758	17.49635	0.96049	1.77428
420	12.54486	17.65285	0.87257	1.76987
421	12.39678	17.71801	0.78375	1.84396
422	12.62843	17.38952	1.05884	1.83469
423	12.60049	17.69673	0.84868	1.77066
424	12.54175	17.51428	0.93032	1.91941
425	12.53448	17.49724	0.89567	1.696
426	12.47215	17.45814	0.93952	1.85437
427	12.72861	17.5145	0.98303	1.87564
428	12.52501	17.4509	0.85777	1.8969
429	12.50481	17.58089	0.8701	1.65222
430	12.40417	17.52987	1.0169	1.80312
431	12.65936	17.54357	1.02138	1.83491
432	12.55698	17.76011	0.89208	1.66206
433	12.61019	17.37905	0.89892	1.83978
434	12.65509	17.60339	0.85586	1.80969
435	12.63962	17.53611	1.15719	1.80901
436	12.4905	17.44622	0.9809	1.76579
437	12.63327	17.51539	0.89623	1.9581
438	12.43718	17.69562	1.21157	1.7814
439	12.56945	17.60762	1.13745	1.89555
440	12.6372	17.59916	1.05929	1.95494
441	12.34889	17.56106	1.02676	1.86896
442	12.55283	17.50882	1.14003	1.94306
443	12.56033	17.8177	1.03046	1.97315

444	12.53309	17.757	1.00871	1.76964
445	12.62612	17.58947	0.89017	1.88231
446	12.56529	17.73015	0.90397	1.88344
447	12.60569	17.61698	1.08216	1.87654
448	12.65763	17.65897	0.97944	1.7383
449	12.42841	17.50247	1.15595	1.88141
450	12.70506	17.63135	1.17502	1.95177
451	12.72514	17.70041	1.10639	2.03457
452	12.72838	17.67357	1.09685	1.8788
453	12.56876	17.85078	0.96811	1.81387
454	12.64274	17.69963	1.00187	1.7383
455	12.69606	17.65741	0.91148	1.91342
456	12.67228	17.59314	0.84072	1.85075
457	12.61181	17.70108	0.90161	1.62835
458	12.59599	17.84143	1.2164	1.7417
459	12.5721	17.65017	1.15606	1.90742
460	12.59599	17.61252	1.01611	1.64532
461	12.50493	17.76747	1.03932	1.87247
462	12.64216	17.73305	1.10403	1.86285
463	12.40313	17.71389	1.12242	1.86726
464	12.59345	17.65786	0.96912	1.87564
465	12.67482	17.78807	1.11345	1.86523
466	12.69294	17.74909	1.15662	1.72292
467	12.53413	17.65886	1.17075	1.79916
468	12.48843	17.65363	1.00736	1.78152
469	12.62531	17.70297	1.08026	1.83367
470	12.5257	17.6749	1.08239	1.77903
471	12.70414	17.45959	1.15259	1.8874
472	12.62519	17.83419	1.12713	1.97055
473	12.74638	17.7336	1.00265	1.7865
474	12.87253	17.64015	1.1481	1.82337
475	12.68359	17.5624	1.06422	1.94079
476	12.66132	17.76658	1.14765	1.8546

477	12.67275	17.68025	1.15696	1.88525
478	12.71683	17.5888	1.1139	2.02779
479	12.63754	17.80278	1.23894	1.91625
480	12.78124	17.72224	1.15169	1.94317
481	12.62335	17.65998	1.14541	2.00437
482	12.57499	17.77404	1.11076	1.82778
483	12.74142	17.70654	1.24387	1.82349
484	12.63581	17.79086	1.01454	1.90018
485	12.60673	17.59604	1.07846	1.81183
486	12.72307	17.75555	1.07409	1.81308
487	12.76012	17.80211	1.07656	1.8891
488	12.78343	18.0593	1.17423	1.9503
489	12.63523	17.63647	1.14777	1.91806
490	12.6859	17.65118	1.16492	1.9193
491	12.59068	17.81035	1.06702	1.9348
492	12.61423	17.78195	1.19038	1.88751
493	12.6694	17.7844	1.20485	1.75346
494	12.77143	17.77938	1.11233	1.90267
495	12.55779	17.70899	1.19722	1.87869
496	12.79278	17.80456	1.07644	1.8822
497	12.74696	17.98445	1.29355	1.8253
498	12.68463	17.88353	1.09831	1.99159
499	12.68937	17.86649	1.18354	1.94204
500	12.63431	17.64438	1.07925	1.96919
501	12.67332	17.63981	1.16447	2.13344
502	12.74465	17.82773	1.19296	1.9538
503	12.84945	17.8871	1.26473	2.0262
504	12.67736	17.90069	1.14956	1.99702
505	12.75988	17.84522	1.12455	2.02134
506	12.68417	17.98434	1.25677	1.86116
507	12.77939	17.80478	1.2691	1.9848
508	12.73588	17.84221	1.2598	1.87507
509	12.79647	17.68092	1.10683	2.04012

510	12.72561	17.72213	1.19958	1.96546
511	12.92412	17.85758	1.12993	2.13062
512	12.70356	17.81559	1.14552	1.92326
513	12.6462	17.74764	1.17367	1.90527
514	12.66016	17.937	1.13565	2.0417
515	12.70241	17.68337	1.20395	1.88582
516	12.73369	17.81926	1.18971	2.04362
517	12.8124	17.93722	1.34715	2.02111
518	12.70472	17.81581	1.22256	1.97677
519	12.64354	17.81971	1.24365	2.0719
520	12.757	17.9018	1.1462	2.05448
521	12.76219	17.71678	1.33089	1.93265
522	12.86711	17.89579	1.28604	2.18084
523	12.8229	17.80924	1.06534	2.11919
524	12.65105	17.80935	1.17603	2.12632
525	12.65613	17.81781	1.27628	1.91964
526	12.79843	17.84934	1.26238	1.98163
527	12.61354	17.84811	1.24746	2.15562
528	12.78389	17.93388	1.21135	2.0046
529	12.92239	17.83174	1.14519	2.14283
530	12.65451	17.9546	1.22985	2.13186
531	12.86422	17.78729	1.28424	2.24396
532	12.8588	17.75276	1.28368	2.07598
533	12.8042	17.94836	1.14889	1.896
534	12.85268	17.87418	1.28021	2.13163
535	12.79532	17.82617	1.17625	2.0322
536	12.87542	17.92074	1.23389	2.00256
537	12.83398	17.69284	1.31732	2.04973
538	12.90485	17.76279	1.22066	1.9727
539	12.88511	17.8842	1.12321	1.92247
540	12.69744	17.84555	1.13879	1.95256
541	12.80005	17.84009	1.29916	2.05607
542	12.80236	17.52742	1.21965	2.015

543	12.77466	17.91405	1.2755	2.02281
544	12.70887	17.78674	1.23692	2.02903
545	12.7832	17.93789	1.15876	2.02315
546	12.84737	17.90013	1.3208	2.15154
547	12.90704	17.83107	1.21842	2.02428
548	12.84829	17.82049	1.15976	2.0193
549	12.80917	17.83942	1.2395	1.98955
550	12.91316	17.82182	1.31048	2.15516
551	12.82475	17.72592	1.22447	2.19034
552	12.94097	17.78729	1.2912	2.04181
553	12.85476	17.85669	1.29983	1.94057
554	12.78689	17.97097	1.33841	1.93288
555	12.82394	17.9165	1.26866	1.9348
556	12.81667	17.90414	1.33403	2.11806
557	12.83537	17.93678	1.31979	2.15856
558	12.79936	18.01709	1.22638	2.11727
559	12.92239	17.91929	1.40177	2.0339
560	12.82798	17.85379	1.27763	2.02134
561	12.9292	17.8685	1.35579	2.06908
562	12.79809	18.00094	1.28604	2.29634
563	13.04242	17.93511	1.31923	2.15878
564	12.90242	17.802	1.2617	2.05007
565	12.82013	18.01286	1.29848	2.07869
566	12.82625	17.99626	1.25957	2.08457
567	12.7802	18.03413	1.19935	2.19261
568	12.87138	18.01653	1.16403	2.19872
569	12.7922	17.85246	1.22402	2.06116
570	13.04646	17.92497	1.25856	2.09295
571	12.84021	17.93878	1.26249	2.07643
572	12.9105	18.00094	1.30017	2.10381
573	13.00087	17.80055	1.20586	2.18605
574	12.88604	17.88966	1.16335	2.04826
575	12.83548	18.01653	1.27	2.24238

576	12.94386	17.75432	1.30734	2.02654
577	13.22247	17.9057	1.16874	2.22157
578	13.09505	17.91138	1.46468	2.12032
579	13.30361	17.97688	1.44337	2.11025
580	13.043	17.98857	1.282	2.07281
581	13.1381	17.9791	1.47118	2.19261
582	13.22282	17.93232	1.31755	2.21806
583	13.03238	17.95504	1.37441	2.27292
584	13.04312	18.04338	1.27079	2.15697
585	12.99683	17.80667	1.30712	2.15414
586	13.23159	17.90314	1.23849	2.21376
587	13.06239	17.99726	1.30555	2.25618
588	12.97087	17.96696	1.26978	2.26602
589	13.05731	17.8852	1.38102	1.94
590	13.03158	17.92653	1.26114	2.10935
591	12.88984	17.91027	1.24802	2.2141
592	13.03031	18.11344	1.29781	2.16467
593	13.01242	17.90826	1.18186	2.22835
594	13.03446	18.00862	1.3697	2.18016
595	13.16742	18.05128	1.29164	2.17473
596	12.98541	18.07735	1.30488	2.25539
597	12.96983	17.97443	1.35186	2.23062
598	12.8596	17.97443	1.29815	2.21342
599	12.88627	17.99993	1.30118	2.12745
600	12.89619	17.97031	1.22256	2.21376
601	12.96025	17.90848	1.27482	2.25539
602	13.02315	17.93722	1.17636	2.13706
603	13.0265	18.10776	1.42924	2.22066
604	13.1156	18.07891	1.32865	2.34272
605	13.09402	17.97877	1.40681	2.2762
606	13.05662	18.04226	1.36857	2.19928
607	13.06228	17.85602	1.3236	2.18616
608	13.05431	18.16769	1.21146	2.13503

609	12.92078	17.98612	1.34233	2.36523
610	13.1815	17.93978	1.31396	2.45788
611	12.94744	18.11121	1.29703	2.18231
612	13.02096	18.08437	1.26305	2.33752
613	12.98702	17.9536	1.37261	2.10347
614	12.98829	17.91339	1.39953	2.17043
615	13.06008	18.21937	1.40154	2.13729
616	12.98033	18.03146	1.45246	2.3072
617	12.94478	18.17214	1.35388	2.32982
618	13.21705	18.0358		2.19136
619	13.0879	18.08437		2.24001
620	13.1867	18.1287		2.23978
621	12.99603	18.13516		2.29193
622	12.92759	18.07846		2.33797
623	12.97514	18.22973		2.22224
624	12.97618	18.24298		2.23752
625	12.94351	18.05685		2.18627
626	12.9928	18.1678		2.37259
627	13.01842	18.36785		2.35799
628	13.03354	18.47233		2.50155
629	13.028	18.36072		2.2951
630	12.8311	18.41987		2.27915
631	12.9404	18.32396		2.46704
632	12.9711	18.46699		2.49668
633	12.9876	18.38868		2.47168
634	13.02857	18.46153		2.40381
635	13.0527	18.23853		2.35539
636	13.09448	18.38211		2.36998
637	12.98137	18.17337		2.38164
638	12.96406	18.33443		2.31546
639	12.92343	18.3224		2.54623
640	12.90496	18.32641		2.37745
641	12.83398	18.23886		2.37847

642	12.9943	18.22928		2.40121
643	13.01265	18.48214		2.3753
644	13.02257	18.23274		2.30177
645	13.055	18.38155		2.29906
646	12.9981	18.33321		2.44498
647	13.17319	18.28186		2.3865
648	13.11537	18.21013		2.58752
649	13.06735	18.21614		2.48118
650	13.02604	18.32385		2.44996
651	12.9419	18.20121		2.34419
652	13.12045	18.48492		2.41455
653	13.07324	18.37843		2.45109
654	12.93162	18.38055		2.40313
655	13.05962	18.2255		2.33616
656	13.07786	18.31795		2.6279
657	12.98668	18.37142		2.46738
658	13.04023	18.34502		2.38786
659	13.05904	18.47222		2.4408
660	12.84345	18.22672		2.55913
661	13.01957	18.37843		2.39894
662	13.00514	18.35805		2.51422
663	13.04693	18.41987		2.46184
664	13.13845	18.44048		2.32349
665	13.05408	18.37186		2.4434
666	13.0692	18.28542		2.46817
667	13.10752	18.38155		2.51738
668	13.12183	18.38322		2.65358
669	13.09228	18.31416		2.38967
670	13.08467	18.31227		2.44317
671	13.05639	18.53638		2.37281
672	13.05777	18.43981		2.48605
673	13.08028	18.56969		2.5063
674	13.03712	18.4084		2.4253

675	12.98195	18.38579		2.54012
676	12.88142	18.52257		2.44883
677	12.95805	18.58294		2.52621
678	13.07601	18.5131		2.44351
679	12.87496	18.35816		2.44725
680	13.04946	18.29211		2.42485
681	13.0752	18.42421		2.47541
682	13.0505	18.37966		2.61037
683	12.97952	18.4192		2.62734
684	13.09078	18.20244		2.54985
685	13.28734	18.54463		2.59272
686	13.23529	18.36173		2.58107
687	13.19143	18.59408		2.4951
688	13.14457	18.37721		2.67168
689	13.16327	18.51065		2.70743
690	13.20747	18.33421		2.75415
691	13.13453	18.44716		2.45618
692	13.14111	18.43246		2.49702
693	13.32577	18.4994		2.62519
694	13.11433	18.52101		2.44408
695	13.12402	18.56256		2.53888
696	12.94686	18.57392		2.67756
697	13.02292	18.38957		2.66603
698	13.11837	18.48403		2.52802
699	13.16546	18.48826		2.57315
700	13.28111	18.35538		2.59035

Table Apx. 2. 9: Time course of percent vesicle fusion of all constructs at pH 4.23 in lipid:protein 600:1.

Time (s)	FPHM	V2E	G10V	L9R
1	3.09424	0.01366	14.22331	1.29467
2	4.40034	0.21621	15.36975	1.22198

3	5.22694	0.15055	16.29594	1.1466
4	5.49202	0.19204	17.01521	1.2802
5	6.05153	0.14608	17.53949	1.10886
6	6.91413	0.15359	17.9672	1.07215
7	6.81251	0.1916	18.34394	1.10379
8	6.85104	0.11907	18.56495	1.11827
9	7.04772	0.06941	18.67615	1.31215
10	7.20999	0.22416	18.87973	1.14515
11	7.37479	0.15403	19.0289	1.19251
12	7.79541	0.13911	19.18194	1.19841
13	7.67587	0.1341	19.21969	1.25455
14	7.76773	0.12583	19.45672	1.15953
15	7.91007	0.23168	19.53652	1.18031
16	7.77564	0.1451	19.58825	1.10452
17	9.17142	0.2283	19.3724	1.27017
18	8.20072	0.28874	19.7871	1.22591
19	8.21292	0.08956	19.70106	1.23408
20	8.33145	0.19084	19.74925	1.15508
21	8.20602	0.2491	19.95294	1.18507
22	8.27063	0.13955	19.78947	1.2044
23	8.42844	0.17505	20.06586	1.06781
24	8.53654	0.20478	20.01661	1.20016
25	8.70134	0.13192	20.05188	1.15963
26	8.69554	0.22895	19.91497	1.20047
27	8.65364	0.25204	20.02725	1.24328
28	8.7556	0.27164	20.17384	1.08404
29	8.91266	0.28351	20.1163	1.07184
30	8.96742	0.30159	20.30633	1.15673
31	9.18488	0.29038	20.18481	1.15001
32	8.86429	0.18082	20.31634	1.25238
33	9.15266	0.15479	20.26794	1.23553
34	9.16705	0.20489	20.34699	1.11206
35	9.25757	0.27012	20.41582	1.28319

36	9.31687	0.1549	20.30709	1.1981
37	9.36878	0.25433	20.28794	1.18414
38	9.33639	0.41245	20.47615	1.14898
39	9.39561	0.54172	20.57563	1.26851
40	9.46392	0.52669	20.44184	1.22498
41	9.55915	0.57896	20.40915	1.11165
42	9.70712	0.53214	20.44303	1.16552
43	9.65278	0.64725	20.61736	1.1466
44	9.59667	0.40004	20.5439	1.22622
45	9.55183	0.45612	20.52584	1.18072
46	9.75356	0.62253	20.44916	1.06967
47	9.91188	0.53377	20.66758	1.10059
48	9.67415	0.61381	20.71834	1.1617
49	9.70519	0.44001	20.7519	1.2804
50	9.98137	0.44905	20.43464	1.1921
51	10.00669	0.53127	20.79277	1.25952
52	9.96454	0.38523	20.68404	1.07112
53	10.10217	0.48977	20.84052	1.07712
54	10.04379	0.55098	20.8702	1.25569
55	10.09805	0.40178	20.72082	1.15425
56	10.2276	0.50219	20.93182	1.15084
57	10.18276	0.47725	20.81212	1.14743
58	10.15533	0.40592	20.7006	1.20099
59	10.21876	0.43641	20.68974	1.25848
60	10.22356	0.3335	20.76609	1.1618
61	10.3786	0.30889	20.90935	0.95231
62	1.04E+01	0.4118	20.91408	1.17586
63	1.03E+01	0.41376	20.95527	1.17224
64	1.04E+01	0.32577	20.9144	1.15146
65	10.54247	0.45493	20.8987	1.19706
66	10.46028	0.3457	20.93871	1.21464
67	10.56493	0.43489	21.04131	1.0249
68	10.46382	0.13421	20.79513	1.10617

69	10.66176	0.37684	20.96979	1.17938
70	10.54794	0.3934	20.84224	1.17049
71	10.61642	0.57875	20.98172	1.12706
72	10.69263	0.42204	20.98947	1.2531
73	10.6727	0.4277	20.94312	1.22912
74	10.8078	0.48999	21.01711	1.13895
75	10.75009	0.27949	20.87816	1.16873
76	10.83867	0.38523	21.13928	1.03751
77	10.72805	0.29538	20.96237	1.10183
78	10.91539	0.39601	20.79094	1.28836
79	10.70626	0.3298	21.13466	1.27161
80	10.80494	0.43783	21.05324	1.18372
81	10.8915	0.50437	21.15294	1.20906
82	10.88931	0.35931	21.04012	1.22436
83	10.84321	0.50513	20.97097	1.19024
84	10.87585	0.43315	21.05098	1.15467
85	11.0849	0.33927	21.04776	1.19716
86	11.03695	0.34123	21.05292	1.18062
87	11.02408	0.44763	21.15659	1.17566
88	11.16709	0.44556	21.00979	1.1769
89	11.08961	0.36802	21.00872	1.23532
90	11.14429	0.44567	21.2807	1.21081
91	11.06513	0.4253	21.24629	1.16066
92	11.18577	0.57918	20.96129	1.19737
93	11.18804	0.42759	21.25521	1.17142
94	11.07068	0.38708	21.09841	1.26396
95	11.14026	0.31009	21.20682	1.13016
96	11.20301	0.35223	21.0484	1.34286
97	11.44024	0.31205	21.10067	1.2194
98	11.36445	0.45155	21.218	1.14857
99	11.28722	0.43249	21.0997	1.15498
100	11.41711	0.45558	21.23295	1.2833
101	11.25618	0.48106	21.1082	1.23253

102	11.40482	0.47562	21.20929	1.17752
103	11.50552	0.60227	21.10487	1.19261
104	11.4267	0.52506	21.08346	1.25083
105	11.55095	0.51918	21.13455	1.09076
106	11.54859	0.45307	21.30361	1.12695
107	11.44798	0.41648	21.12336	1.25921
108	11.5809	0.45471	21.28103	1.18569
109	11.57316	0.46625	21.3348	1.21929
110	11.54018	0.52615	21.20929	1.18507
111	11.73938	0.41463	21.22661	1.15601
112	11.66594	0.56209	21.30533	1.20699
113	11.69959	0.55599	21.03034	1.36891
114	11.68117	0.52495	21.12949	1.22912
115	11.8792	0.53137	21.2108	1.17969
116	11.82107	0.55925	21.44374	1.2044
117	11.72567	0.45798	21.29942	1.16232
118	11.65745	0.50513	21.3662	1.14743
119	11.92799	0.41322	21.28995	1.2926
120	11.66737	0.50404	21.19499	1.22694
121	11.93783	0.57984	21.28619	1.18248
122	11.77135	0.62002	21.39976	1.19334
123	11.86902	0.60989	21.23295	1.11568
124	11.97712	0.49468	21.37405	1.30036
125	12.04366	0.50785	21.38696	1.22291
126	1.19E+01	0.48041	21.19768	1.24918
127	1.18E+01	0.53486	21.41567	1.20027
128	1.21E+01	0.53736	21.1624	1.11072
129	1.21E+01	0.54575	21.39072	1.2075
130	1.19E+01	0.54913	21.27317	1.26282
131	1.20E+01	0.64932	21.332	1.22033
132	1.21E+01	0.59182	21.44751	1.28237
133	1.20E+01	0.58365	21.26791	1.19355
134	1.21E+01	0.64529	21.28888	1.16966

135	1.23E+01	0.57189	21.31103	1.25993
136	1.21E+01	0.67523	21.14735	1.26675
137	1.21E+01	0.61272	21.3391	1.13605
138	1.22E+01	0.52299	21.16778	1.13761
139	1.21E+01	0.57221	21.32587	1.26117
140	1.23E+01	0.6063	21.29576	1.24556
141	1.22E+01	0.68231	21.31458	1.28868
142	1.23E+01	0.4864	21.54118	1.19334
143	1.23E+01	0.67632	21.32082	1.23346
144	1.24E+01	0.60314	21.45192	1.1313
145	12.38613	0.67534	21.40105	1.15539
146	12.22234	0.62579	21.38599	1.37595
147	12.40447	0.55272	21.64324	1.17318
148	12.3174	0.70638	21.50741	1.3259
149	12.38419	0.64921	21.44116	1.21702
150	12.30537	0.51352	21.36104	1.12799
151	12.46823	0.66979	21.37599	1.26706
152	12.42264	0.66543	21.46547	1.10483
153	12.44358	0.73328	21.33233	1.23222
154	12.5288	0.6577	21.49537	1.25197
155	12.32758	0.65727	21.53354	1.23356
156	12.45065	0.632	21.45385	1.19055
157	12.52476	0.66413	21.41223	1.3047
158	12.5394	0.64169	21.47386	1.28485
159	12.57137	0.68623	21.60431	1.41658
160	12.53747	0.75212	21.426	1.32362
161	12.56296	0.74874	21.34082	1.25269
162	12.71303	0.58071	21.41675	1.30067
163	12.66803	0.76312	21.3605	1.28992
164	12.63799	0.66053	21.35513	1.30129
165	12.70723	0.66413	21.45815	1.2285
166	12.74483	0.88607	21.44826	1.29405
167	12.60948	0.67327	21.4445	1.32704

168	12.7365	0.7495	21.39094	1.24545
169	12.68266	0.70464	21.49418	1.29426
170	12.91552	0.68297	21.54892	1.20844
171	12.64758	0.72762	21.48644	1.48472
172	12.60973	0.68373	21.57	1.30532
173	12.74458	0.69407	21.6384	1.26541
174	12.84317	0.75397	21.56807	1.43985
175	12.75266	0.69712	21.44708	1.38494
176	12.74576	0.81757	21.50784	1.52743
177	12.81247	0.86309	21.44417	1.38825
178	12.84788	0.75451	21.44977	1.50137
179	12.85201	0.82367	21.4602	1.64903
180	12.79951	0.82149	21.43665	1.37646
181	12.84006	0.74863	21.44116	1.41224
182	12.83022	0.83826	21.45192	1.48297
183	12.80414	0.75157	21.5244	1.49114
184	12.67484	0.75397	21.39449	1.56341
185	12.87346	0.90208	21.53828	1.50158
186	12.87506	0.90425	21.50634	1.54025
187	13.04978	0.76475	21.49332	1.51771
188	12.98854	0.77052	21.47741	1.53942
189	13.02227	0.82476	21.40944	1.51295
190	13.00444	0.72348	21.4446	1.44864
191	13.1101	0.72413	21.53774	1.56114
192	13.07005	0.84632	21.60775	1.45898
193	13.00519	0.78784	21.56936	1.49165
194	13.01731	0.74765	21.40019	1.54625
195	13.15653	0.747	21.55871	1.47986
196	13.22644	0.69309	21.48751	1.5903
197	12.91123	0.93976	21.42084	1.37398
198	13.10177	0.85525	21.62001	1.68563
199	13.37223	0.97156	21.47396	1.50727
200	13.02143	0.88345	21.47913	1.57996

201	13.23325	0.84055	21.68002	1.50365
202	13.3867	0.89053	21.58097	1.52567
203	13.19893	0.7825	21.47235	1.48721
204	13.16537	0.80406	21.50784	1.46167
205	13.36154	0.85351	21.54656	1.6178
206	13.20911	0.82497	21.67196	1.51099
207	13.15998	0.99083	21.7581	1.45867
208	13.25723	0.8228	21.67594	1.61263
209	13.19523	0.85481	21.6598	1.61997
210	13.27683	0.9905	21.55226	1.47862
211	13.30745	0.83412	21.49934	1.61325
212	13.21769	0.92092	21.58861	1.59454
213	13.29904	0.95119	21.58355	1.64003
214	13.23797	0.95794	21.60033	1.61594
215	13.43969	0.83576	21.47041	1.50644
216	13.33033	0.9146	21.73627	1.66433
217	13.59162	0.98985	21.61797	1.60953
218	13.4709	1.12685	21.62055	1.60953
219	13.37652	1.04909	21.71304	1.52578
220	13.44693	0.81071	21.69938	1.57189
221	13.51667	0.88019	21.5728	1.6055
222	13.47494	0.91101	21.58603	1.5721
223	13.50598	1.12957	21.70659	1.53529
224	13.31014	0.9378	21.5685	1.56155
225	13.55864	0.88792	21.49934	1.58947
226	13.40916	0.95718	21.7281	1.66775
227	13.55646	1.01882	21.65733	1.54666
228	13.62796	0.98844	21.81241	1.73113
229	13.66759	0.90327	21.62905	1.67488
230	13.53652	1.04986	21.60012	1.74705
231	13.63343	0.99791	21.54817	1.59692
232	13.66102	0.89326	21.47052	1.62359
233	13.68172	1.02459	21.57162	1.60994

234	13.6341	0.95435	21.53623	1.60353
235	13.64773	0.98549	21.64195	1.63507
236	13.73859	1.00444	21.43116	1.84074
237	13.84845	1.02775	21.48149	1.69401
238	13.8127	0.99061	21.73164	1.57903
239	13.81741	1.03004	21.48913	1.58678
240	13.82818	1.05269	21.55462	1.66878
241	13.92988	0.84632	21.55936	1.64996
242	13.76164	1.03777	21.48461	1.59826
243	13.68029	1.24163	21.63163	1.7576
244	13.78502	1.04833	21.54204	1.68377
245	13.82574	0.99965	21.5286	1.63579
246	13.84172	1.1165	21.64808	1.60084
247	13.99138	1.0174	21.62399	1.72689
248	13.81598	1.11552	21.57968	1.67674
249	14.02267	1.14199	21.51709	1.68677
250	13.82557	1.09625	21.65754	1.76701
251	13.78889	1.24588	21.53871	1.65596
252	13.92904	1.07153	21.66238	1.61181
253	13.90271	1.11215	21.54763	1.66599
254	13.79099	1.14732	21.49321	1.76743
255	13.97119	0.98234	21.63098	1.69236
256	13.79806	1.16322	21.5186	1.6723
257	14.17359	1.14471	21.38051	1.7849
258	13.9706	1.12064	21.63862	1.81044
259	13.84012	1.09636	21.5002	1.64986
260	14.05413	1.07283	21.47999	1.77508
261	14.03588	1.00368	21.58549	1.62566
262	13.99626	1.20744	21.49128	1.59671
263	14.05439	1.21735	21.5201	1.71707
264	14.07979	1.19197	21.4945	1.69856
265	14.10797	1.15723	21.53075	1.60622
266	14.10907	1.23553	21.83747	1.74209

267	14.04749	1.28378	21.61044	1.62742
268	14.1375	1.10953	21.79058	1.9125
269	13.91398	1.09941	21.61883	1.68656
270	13.9918	1.12304	21.6255	1.69546
271	14.23534	1.17945	21.71852	1.71634
272	14.09981	1.10855	21.75133	1.74468
273	14.10402	1.3159	21.64754	1.73351
274	14.09527	1.207	21.56645	1.79183
275	14.09695	1.21615	21.61646	1.70135
276	14.19504	1.19883	21.55344	1.86007
277	14.19756	1.28508	21.68336	1.84477
278	14.21027	1.29837	21.4816	1.80082
279	13.94839	1.23978	21.59936	1.72855
280	14.30373	1.29826	21.67895	1.76846
281	14.25721	1.30098	21.77294	1.721
282	14.34293	1.11247	21.62152	1.63962
283	14.35816	1.15092	21.68604	1.78604
284	14.20556	1.18762	21.58463	1.83133
285	14.23264	1.22007	21.47805	1.79245
286	14.17721	1.16769	21.74186	1.8396
287	14.78517	1.12794	21.52128	1.82088
288	14.50554	1.14667	21.58592	1.76143
289	14.77188	1.26581	21.74541	1.83009
290	14.31273	1.35957	21.73164	1.77487
291	14.155	1.23902	21.59635	1.82781
292	14.43294	1.10082	21.62808	1.75771
293	14.36253	1.18206	21.73885	1.82306
294	14.4035	1.22443	21.68691	1.74654
295	14.33435	1.26603	21.57183	1.8213
296	14.38844	1.17183	21.04883	1.79214
297	14.57452	1.34738	21.39212	1.79307
298	14.43479	1.29837	21.66561	1.61398
299	14.44379	1.32331	21.6028	1.83888

300	14.49503	1.2437	21.63991	1.82967
301	14.421	1.25122	21.62905	1.81261
302	14.46129	1.17237	21.48848	1.71407
303	14.29633	1.31242	21.67551	1.81675
304	14.35101	1.36937	21.65776	1.85252
305	14.5201	1.33877	21.45633	1.72131
306	14.43875	1.42252	21.58893	1.79658
307	14.46558	1.31111	21.64776	1.75367
308	14.4019	1.44833	21.7281	1.74633
309	14.54373	1.29652	21.73143	1.84673
310	14.48089	1.35369	21.493	1.97113
311	14.57772	1.38386	21.80327	1.76257
312	14.74639	1.29674	21.55828	1.85614
313	14.47643	1.33943	21.73863	1.7302
314	14.6308	1.24523	21.61722	1.70942
315	14.49023	1.3391	21.60915	1.68377
316	14.59715	1.41359	21.61345	1.71552
317	14.63223	1.17923	22.08526	1.75853
318	14.53877	1.36208	21.61377	1.82698
319	14.56182	1.31634	21.81585	1.89606
320	14.72081	1.37754	21.7224	1.71169
321	14.91161	1.49319	21.71928	1.92284
322	14.68994	1.48328	21.6099	1.76319
323	14.54836	1.33583	21.70444	1.79503
324	14.70769	1.2755	21.7866	1.86824
325	14.74555	1.4455	21.80779	1.88189
326	14.80595	1.42317	21.68551	1.93659
327	14.64998	1.34803	21.88511	1.86349
328	14.68372	1.42568	21.63109	1.92087
329	14.76136	1.41664	21.78961	1.84043
330	14.6822	1.26733	21.82575	1.91022
331	14.79467	1.36905	21.88103	1.91932
332	14.85735	1.35369	21.79176	1.8215

333	14.81545	1.4358	21.62711	1.74178
334	14.83068	1.40999	21.65754	1.93039
335	14.78938	1.45889	21.65582	1.80196
336	14.86349	1.42067	21.78359	1.80072
337	14.84675	1.35652	21.77348	1.88075
338	14.67076	1.48993	21.48622	1.94983
339	14.84128	1.40172	21.87361	1.94321
340	14.81966	1.32211	21.76036	1.90081
341	14.75144	1.426	21.80542	1.86473
342	14.95182	1.51596	21.90824	1.93349
343	14.9212	1.51868	21.74025	2.0373
344	14.77524	1.44953	21.73164	2.17659
345	14.85121	1.41457	21.84908	2.17441
346	14.9371	1.45715	21.79155	2.10607
347	14.80427	1.37427	21.57291	2.04165
348	14.87695	1.44049	21.72605	2.14732
349	14.84515	1.50452	21.82284	2.15756
350	14.89512	1.32091	21.77402	2.2073
351	14.88141	1.45236	21.66228	2.14908
352	14.80906	1.47239	21.79058	2.24225
353	14.9906	1.29565	21.72379	2.09045
354	14.89739	1.51018	21.79886	2.21681
355	14.94071	1.47163	21.81123	2.19768
356	14.90126	1.6205	21.80284	2.1801
357	14.97933	1.42883	21.82973	2.28071
358	14.90774	1.65274	21.86877	2.11827
359	14.94315	1.43417	21.67368	2.09459
360	15.06589	1.56322	21.81091	2.15591
361	14.96604	1.52761	21.87909	2.0068
362	15.16919	1.57237	21.79886	2.20471
363	15.18358	1.49526	21.80112	2.12664
364	14.98757	1.38865	21.88834	2.20357
365	14.95636	1.45508	21.84855	2.17028

366	15.07859	1.55973	21.84683	2.25393
367	14.99472	1.50114	21.90469	2.11
368	15.1093	1.61952	21.81618	2.19768
369	14.9572	1.52695	21.73121	2.21474
370	15.04133	1.45443	21.76853	2.14774
371	15.11527	1.57563	21.82231	2.29198
372	14.98185	1.52826	21.76864	2.21319
373	15.03821	1.57934	21.85392	2.2136
374	15.09861	1.56485	21.91125	2.28516
375	15.00944	1.66907	21.82758	2.23077
376	15.31549	1.39072	21.86694	2.17214
377	15.2518	1.59796	21.89178	2.04496
378	15.12797	1.72831	21.93448	2.15322
379	15.20856	1.57596	21.70164	2.16687
380	15.10248	1.52968	21.94964	2.25745
381	15.24348	1.59807	21.82403	2.15477
382	15.09289	1.51835	21.80435	2.32269
383	15.38649	1.53164	21.711	2.16108
384	15.32474	1.64087	21.80015	2.20223
385	15.13992	1.46216	21.8179	2.27885
386	15.34493	1.63422	22.04041	2.27306
387	15.08053	1.62094	21.61646	2.24038
388	15.31397	1.60885	21.81639	2.24493
389	15.33164	1.57062	21.88264	2.24121
390	15.19006	1.60068	21.82241	2.3442
391	15.36865	1.67865	21.87318	2.31794
392	15.25559	1.53676	21.79617	2.20905
393	15.26434	1.5263	21.88522	2.31938
394	15.26509	1.50496	21.71616	2.40759
395	15.39465	1.59676	21.82456	2.42434
396	15.23784	1.46728	21.80133	2.38225
397	15.21757	1.6352	21.80607	2.44698
398	15.12074	1.65546	22.11494	2.48627

399	15.34434	1.76142	21.79961	2.39704
400	15.30051	1.60809	21.90243	2.33479
401	15.3912	1.69063	21.92781	2.31907
402	15.33727	1.607	21.8635	2.26355
403	15.26266	1.62311	21.77939	2.32311
404	15.2889	1.73833	21.93093	2.35309
405	15.44529	1.83536	21.95362	2.3472
406	15.51444	1.69118	21.95545	2.37719
407	15.58233	1.596	21.97599	2.32828
408	15.59612	1.57258	21.93125	2.34296
409	15.29816	1.68737	22.1015	2.3228
410	15.42762	1.73321	21.97868	2.40676
411	15.41298	1.81511	22.08278	2.27306
412	15.50863	1.54743	22.10418	2.19168
413	15.67596	1.63858	22.25098	2.34679
414	15.45833	1.76414	22.25776	2.29674
415	15.4664	1.59622	21.99771	2.25166
416	15.6323	1.63858	21.97115	2.40934
417	15.36142	1.76588	22.13204	2.30501
418	15.61698	1.69194	22.20528	2.22436
419	15.61286	1.79311	22.0389	2.26613
420	15.57745	1.6132	22.10655	2.29291
421	15.3684	1.81435	22.20496	2.46177
422	15.58426	1.83765	22.04751	2.2713
423	15.40474	1.72374	22.09235	2.34565
424	15.50443	1.76588	22.20646	2.35547
425	15.52933	1.62867	22.4564	2.32714
426	15.45782	1.83787	22.04267	2.36364
427	15.54926	1.74105	22.12623	2.34761
428	15.69228	1.71786	22.07203	2.31277
429	15.63406	1.77307	22.05719	2.31463
430	15.64862	1.73311	22.10193	2.38535
431	15.56727	1.73572	22.01524	2.3441

432	15.72677	1.76131	22.13795	2.40852
433	15.55843	1.69673	22.0403	2.49393
434	15.6561	1.8346	22.07654	2.27203
435	15.59065	1.71623	22.21915	2.36343
436	15.49551	1.60994	22.01567	2.34379
437	15.52958	1.711	22.02568	2.43726
438	15.76782	1.76305	22.00685	2.2985
439	15.50611	1.81772	22.0203	2.39559
440	15.52571	1.61582	22.07633	2.36033
441	15.74645	1.76011	21.96265	2.30294
442	15.64104	1.73844	22.15505	2.34596
443	15.68782	1.86379	22.11085	2.39052
444	15.67225	1.72396	22.03116	2.32445
445	15.58998	1.78091	21.98556	2.27358
446	15.6042	1.84691	22.10504	2.35754
447	15.63431	1.89613	22.06902	2.45887
448	15.79095	1.73038	22.09096	2.46777
449	15.86717	1.82328	22.00868	2.37315
450	15.67495	1.93719	22.25733	2.40014
451	15.81476	1.91377	21.92071	2.40924
452	15.73594	1.8028	21.99911	2.40945
453	15.80626	1.85987	22.08289	2.38649
454	15.67621	1.94405	22.18173	2.42992
455	15.86843	1.85812	22.08633	2.38773
456	15.68075	1.71154	22.22679	2.5235
457	15.80037	1.89787	21.98051	2.50261
458	15.71103	1.85072	22.15409	2.29963
459	15.86456	1.87195	22.05181	2.36116
460	15.81173	1.93828	22.17473	2.3684
461	15.89678	1.86008	22.0901	2.2986
462	15.8649	1.88742	21.9647	2.50282
463	15.83301	1.96136	22.13494	2.58058
464	15.85825	1.83776	22.17914	2.53094

465	15.84757	1.92357	22.17549	2.47345
466	15.73484	2.01244	21.97298	2.41369
467	16.02616	1.82262	22.08257	2.46466
468	15.78237	1.95036	22.05299	2.35826
469	15.87928	1.93512	22.10892	2.40386
470	15.91142	1.92673	21.90877	2.38442
471	15.90317	2.00329	22.13139	2.58006
472	15.84589	1.99066	22.26604	2.3747
473	15.97813	1.91617	22.14505	2.3167
474	15.8723	1.89635	22.11397	2.45836
475	15.92589	1.91247	22.08397	2.48162
476	15.88584	1.90865	22.21872	2.34823
477	15.92925	1.98674	21.92899	2.54769
478	15.84496	1.94165	22.09762	2.38236
479	15.98318	1.98271	22.10741	2.55028
480	15.97216	1.90963	22.01643	2.44843
481	15.98671	2.0964	21.9534	2.43385
482	15.95769	2.02278	22.02223	2.4992
483	16.04862	2.06602	21.93254	2.43044
484	15.96231	2.08682	22.17904	2.34451
485	15.93152	1.96637	22.15591	2.39807
486	15.96803	1.95363	22.15419	2.51554
487	15.99226	1.90332	22.04751	2.53187
488	16.08799	2.03847	21.99384	2.47469
489	15.93068	1.9092	22.28228	2.53311
490	16.02616	1.99763	22.11515	2.56176
491	14.90639	1.9936	22.01718	2.35413
492	14.92195	1.92564	21.95362	2.33851
493	14.99708	1.92368	22.12053	2.4414
494	15.4399	2.04979	22.05439	2.40055
495	15.44394	1.88252	22.02482	2.45774
496	15.56315	1.94797	22.04417	2.59505
497	15.70893	1.91965	21.91738	2.58213

498	15.62843	1.98576	22.05794	2.54077
499	15.75141	1.92945	22.05547	2.48907
500	15.80929	2.04282	21.99986	2.56372
501	15.8193	1.92989	22.24131	2.53063
502	16.0371	2.06438	22.22098	2.65699
503	15.95499	1.94873	22.1586	2.48576
504	16.05922	1.99686	22.10504	2.53187
505	15.87962	2.00133	21.39599	2.47831
506	16.00505	2.08442	21.66088	2.51967
507	15.96618	2.08301	21.54602	2.64055
508	16.17119	2.02779	21.71315	2.52391
509	16.07445	2.08224	21.61722	2.59846
510	16.25086	1.96169	21.79574	2.59691
511	16.053	2.14617	21.82994	2.63621
512	16.36518	1.94731	21.82844	2.53156
513	16.3407	2.13495	21.83855	2.56734
514	16.10162	2.16871	22.01578	2.5053
515	16.08093	2.04544	21.87533	2.52557
516	16.33532	2.27402	21.93878	2.42361
517	16.05333	2.1527	22.0274	2.55886
518	16.06932	2.06547	21.98524	2.51357
519	16.19769	2.20781	22.07762	2.52215
520	16.46108	2.09041	22.17979	2.64934
521	16.35576	2.11807	22.07784	2.70207
522	16.47025	2.16534	22.00718	2.65999
523	16.30966	2.03738	22.06504	2.61563
524	16.17683	2.20095	21.95491	2.45215
525	16.24329	2.13953	22.1913	2.5964
526	16.29401	2.17742	22.21668	2.62204
527	16.3561	2.04249	22.05547	2.59309
528	16.40825	2.13561	22.07504	2.65989
529	16.36484	2.13582	22.03299	2.59412
530	16.52123	2.16893	21.97771	2.64138

531	16.41431	2.16621	22.10085	2.58161
532	16.44426	2.2383	22.05633	2.71696
533	16.24917	2.19452	22.15817	2.56631
534	16.30529	2.16806	22.07257	2.63672
535	16.48287	2.15325	22.14753	2.61956
536	16.40825	1.8065	21.99051	2.75109
537	16.47883	1.47479	22.12107	2.62173
538	16.44577	1.49995	22.02525	2.56631
539	16.36611	1.80847	22.18474	2.66185
540	16.39059	1.69891	22.10795	2.70052
541	16.38529	1.80324	22.16893	2.67085
542	16.44459	1.80454	21.98728	2.67974
543	16.58306	1.78538	22.08526	2.70001
544	16.47227	1.89787	22.04944	2.69597
545	16.59871	1.9802	22.0645	2.70724
546	16.67905	1.99785	22.02664	2.72265
547	16.47311	1.95886	22.04331	2.62886
548	16.46764	2.16871	22.17463	2.63548
549	16.60342	2.14965	22.05288	2.83422
550	16.74668	2.14748	22.26583	2.70238
551	16.56068	2.10773	22.25152	2.68201
552	16.57154	2.09499	22.26066	2.64045
553	16.52249	2.17851	22.18495	2.71293
554	16.62024	1.98391	22.14742	2.66661
555	16.56094	2.17492	22.21367	2.80175
556	16.58525	2.05883	22.30863	2.8063
557	16.66357	2.12809	22.1386	2.7788
558	16.59316	2.19147	22.15667	2.83463
559	16.79724	2.13887	22.17463	2.65513
560	16.37965	2.25877	22.16968	2.78469
561	16.59804	2.19463	22.02213	2.59805
562	16.73869	2.17525	22.13161	2.80289
563	16.59509	2.10272	22.20818	2.80113

564	16.79547	2.24048	22.13559	2.81302
565	16.86092	2.2224	22.16495	2.65265
566	16.65608	2.1184	22.15893	2.74581
567	16.80128	2.25333	22.08784	2.7121
568	16.72414	2.28807	21.97663	2.72813
569	16.6157	2.19626	22.10709	2.75326
570	16.55362	2.29656	22.19173	2.7362
571	16.63968	2.05001	22.21808	2.84156
572	16.72355	2.29046	22.10494	2.70435
573	16.76468	2.19888	22.25185	2.78438
574	16.73676	2.24298	22.18108	2.75605
575	16.75232	2.24146	22.31132	2.85718
576	16.82307	2.15368	22.05471	2.77352
577	16.81339	2.29221	22.04998	2.7668
578	16.64615	2.19735	22.27368	2.81002
579	16.8563	2.27195	22.17129	2.76019
580	16.69612	2.30615	22.19001	2.70507
581	16.8425	2.49476	22.15075	2.68346
582	16.67324	2.1674	22.30368	2.77776
583	16.89979	2.33577	22.15602	2.76194
584	16.85158	2.30636	22.12537	2.89161
585	16.91628	2.40383	22.21603	2.82626
586	16.87741	2.32564	22.08805	2.80175
587	16.8706	2.29656	22.207	2.77776
588	16.85184	2.39784	22.12053	2.73371
589	16.91998	2.38771	22.06525	2.77425
590	16.76763	2.36365	22.23722	2.75781
591	16.79303	2.41156	22.2056	2.74685
592	16.73591	2.39773	22.18162	2.80093
593	16.74088	2.27936	22.21926	2.76225
594	16.82509	2.36256	22.21324	2.93204
595	16.77251	2.37519	22.22249	2.8609
596	16.85604	2.29994	22.20227	2.84146

597	16.67257	2.37127	22.09332	2.85924
598	16.92788	2.45066	22.21066	3.03192
599	16.70386	2.27642	22.14226	2.72327
600	16.77427	2.35918	22.42295	2.81096
601	16.8478	2.41701	22.24765	2.8609
602	16.88969	2.29046	22.09913	2.87041
603	16.91468	2.39871	22.24367	2.85707
604	16.896	2.2664	22.22474	2.78025
605	16.94143	2.41429	22.22625	2.88344
606	16.81364	2.36114	22.19861	2.94951
607	16.9262	2.35526	22.26023	2.77725
608	16.83577	2.43487	22.16409	2.85252
609	16.84242	2.401	22.25228	2.8973
610	16.75543	2.26182	22.21055	2.82595
611	16.76965	2.27936	22.11343	2.64748
612	16.78437	2.34622	22.20754	
613	16.85747	2.44304	22.15172	
614	16.99653	2.36757	22.28013	
615	16.90559	2.3276	22.21657	
616	16.92494	2.43465	22.083	
617	16.78134	2.48943	22.25819	
618	16.95018	2.43661	22.24131	
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620	16.82938	2.47527	22.13871	
621	17.00385	2.49738	22.1414	
622	16.80574	2.63383	22.2797	
623	16.81701	2.59528	22.23872	
624	16.9103	2.60955	22.04482	
625	16.92612	2.49694	22.32067	
626	17.02858	2.46013	22.19431	
627	17.15031	2.62664	22.34928	
628	16.88389	2.4365	22.19452	
629	16.94	2.50892	22.11644	

630	16.80582	2.47875	22.28949	
631	16.9538	2.46961	22.35348	
632	16.94395	2.52961	22.36778	
633	16.91914	2.56163	22.0574	
634	17.02967	2.61129	22.23034	
635	17.13197	2.69286	22.39015	
636	16.85714	2.61543	22.18581	
637	17.05348	2.61575	22.14763	
638	16.87842	2.47277	22.14656	
639	16.99678	2.52046	22.11537	
640	17.01933	2.53811	22.23077	
641	17.01024	2.56054	22.1372	
642	16.86715	2.50936	22.35649	
643	16.9352	2.66519	22.20614	
644	16.93764	2.52536	22.12214	
645	16.78294	2.56054	22.28551	
646	16.9808	2.65735	22.3495	
647	16.96961	2.47255	22.22431	
648	17.05777	2.61891	22.23604	
649	16.8155	2.58537	22.12236	
650	17.08511	2.5246	22.23216	
651	17.04583	2.43411	22.22862	
652	16.9893	2.77867	22.28228	
653	17.04961	2.6078	22.3211	
654	16.9506	2.50772	22.07375	
655	16.9845	2.63405	22.18979	
656	17.06551	2.6286	21.87533	
657	17.05895	2.67598	21.4445	
658	17.16259	2.7411	21.16294	
659	16.9686	2.67369	20.96172	
660	16.96692	2.7105	21.0412	
661	16.98635	2.51404	21.15832	
662	17.0497	2.51306	21.12842	

663	16.94084	2.65049	21.38104	
664	16.94967	3.22081	21.25382	
665	17.08099	3.15689	21.42127	
666	16.92494	3.05419	21.50311	
667	17.07931	2.96849	21.61582	
668	17.08949	2.99843	22.01342	
669	17.04961	2.88648	21.88888	
670	17.01277	2.95803	21.9476	
671	16.99855	2.84532	22.1301	
672	17.04002	2.79871	22.30132	
673	17.0645	2.68251	22.1971	
674	17.01823	2.82582	21.62582	
675	17.10976	2.7521	21.48009	
676	17.05668	2.64331	21.60442	
677	17.16907	2.76005	21.54462	
678	17.05895	2.74992	21.63668	
679	17.11464	2.64145	21.58624	
680	17.12381	2.66443	21.51053	
681	17.07401	2.76179	21.81338	
682	16.97272	2.66051	21.70497	
683	17.00267	2.73609	21.80424	
684	17.10093	2.61837	21.75229	
685	17.05441	2.66291	21.85747	
686	17.0481	2.70767	21.80832	
687	17.17496	2.70625	22.04794	
688	17.32537	2.83029	21.96362	
689	17.27759	2.67053	21.97943	
690	17.22097	2.52547	22.00954	
691	17.15039	2.71355	21.98782	
692	16.97483	2.68436	21.99965	
693	17.12541	2.78455	22.08794	
694	17.13567	2.68425	22.1001	
695	17.17815	2.72139	21.96653	

696	17.16873	2.77529	22.13967	
697	17.19161	2.69939	22.1172	
698	17.20659	2.75852	22.17162	
699	17.22055	2.51611	22.19463	
700	17.16671	2.80807	22.27421	

Table Apx. 2. 10: Time course of percent vesicle fusion of all constructs at pH 5.13 in lipid:protein 600:1.

Time (s)	FPHM	G10V	L9R	V2E
1	6.40477	12.67607	0.14249	0.28383
2	6.60376	13.60046	0.1952	0.35952
3	7.04299	15.43961	0.09445	0.10566
4	7.51559	17.02462	0.17075	0.15577
5	7.97551	17.82656	0.10444	0.28522
6	8.18399	18.85393	0.13792	0.18985
7	8.39659	19.59592	0.14971	0.16437
8	8.59072	19.80363	0.29393	0.22243
9	8.72699	20.09618	0.14355	0.19437
10	8.79476	20.51303	0.11113	0.18759
11	9.54055	20.82496	0.1156	0.242
12	9.11282	21.04691	0.14334	0.18663
13	9.15768	21.56192	0.14929	0.21458
14	9.40226	21.54174	0.2342	0.2449
15	9.384	21.8263	0.0801	0.23759
16	9.52946	21.68766	0.2223	0.25662
17	9.58203	21.7021	0.22719	0.26953
18	9.75357	21.59513	0.1191	0.23544
19	9.74153	21.58057	0.12506	0.19878
20	9.73383	22.08299	0.17373	0.16265
21	9.84002	22.55271	0.12527	0.18953
22	9.99045	22.04323	0.2088	0.29888

23	10.20896	22.21866	0.03812	0.39501
24	10.24675	22.23311	0.18595	0.22652
25	10.36402	22.30996	0.22581	0.37941
26	10.40181	22.41171	0.24727	0.21792
27	10.5687	22.35761	0.25312	0.34479
28	10.7413	22.3945	0.33485	0.30297
29	10.66403	22.48283	0.15556	0.33081
30	10.73528	22.44983	0.20838	0.37963
31	10.87494	22.45475	0.05449	0.42178
32	10.82311	22.54103	0.06437	0.34372
33	10.8932	22.52453	0.23027	0.37769
34	10.9901	22.64914	0.17851	0.30383
35	10.99401	22.48129	0.17724	0.37307
36	11.16765	22.64648	0.20785	0.24834
37	11.27121	22.67834	0.21348	0.33404
38	11.28673	22.66277	0.2918	0.37791
39	11.44274	22.77221	0.21922	0.29748
40	11.32156	22.64955	0.2037	0.43522
41	11.56509	22.8716	0.22804	0.40189
42	11.57279	22.69771	0.21964	0.26609
43	11.49954	22.85787	0.27852	0.36436
44	11.55358	22.88124	0.25641	0.38974
45	11.78201	22.82078	0.20593	0.28867
46	11.75721	22.9712	0.16342	0.31286
47	11.82297	22.89425	0.3188	0.20738
48	12.00665	22.97172	0.18106	0.29533
49	11.96168	23.07183	0.09052	0.25942
50	12.00707	22.96782	0.14025	0.54113
51	12.1861	22.97961	0.25461	0.37748
52	12.07537	22.98391	0.10423	0.37329
53	12.21777	23.14274	0.24185	0.22136
54	12.09511	23.11661	0.08425	0.10093
55	12.29958	23.13167	0.03791	0.23254

56	12.34486	22.98145	0.16076	0.21189
57	12.29725	23.00615	0.18436	0.27297
58	12.31932	23.09161	0.15694	0.33221
59	1.24E+01	23.27401	0.24239	0.26673
60	1.23E+01	23.0996	0.20891	0.282
61	1.26E+01	22.95747	0.37172	0.37436
62	12.60813	22.85224	0.39245	0.25265
63	12.57667	22.4193	0.34314	0.38404
64	12.67833	22.28854	0.31433	0.43436
65	12.75971	22.1083	0.24249	0.36178
66	12.712	22.34757	0.2105	0.31952
67	12.90043	22.37831	0.22432	0.4407
68	13.06046	22.33763	0.224	0.35028
69	13.0101	22.50138	0.28373	0.35329
70	13.00071	22.48396	0.20551	0.44404
71	12.95447	22.71431	0.20264	0.43748
72	12.91383	22.78706	0.16406	0.38673
73	13.09909	22.93175	0.28766	0.44296
74	13.05718	22.94385	0.36503	0.4692
75	13.12506	23.02408	0.27809	0.38984
76	13.17119	23.00666	0.25408	0.55833
77	13.14986	23.11528	0.20678	0.44264
78	13.22175	23.24326	0.09742	0.4592
79	13.36626	23.15709	0.27172	0.41103
80	13.36225	23.1783	0.25535	0.37952
81	13.41567	23.13321	0.20072	0.5107
82	13.29522	23.36131	0.14419	0.42941
83	13.44839	23.18568	0.31423	0.40812
84	13.39202	23.41316	0.1851	0.40898
85	13.50645	23.47997	0.22432	0.40984
86	13.55596	23.369	0.13675	0.4636
87	13.62489	23.52731	0.29159	0.55446
88	13.4562	23.25659	0.2545	0.55414

89	13.59322	23.4356	0.28043	0.46113
90	13.6593	23.32914	0.14387	0.60553
91	13.77552	23.31848	0.2629	0.52823
92	13.59375	23.37904	0.34314	0.39329
93	13.71282	23.40507	0.28989	0.51812
94	13.81183	23.49514	0.16374	0.55468
95	13.73509	23.51276	0.3172	0.40619
96	13.85216	23.42771	0.3848	0.55941
97	13.90568	23.5059	0.18266	0.46597
98	13.86525	23.61052	0.27459	0.60812
99	14.02559	23.68563	0.28394	0.49812
100	13.94758	23.58634	0.39	0.60586
101	13.9877	23.63132	0.20051	0.5378
102	13.94684	23.59474	0.25854	0.485
103	14.05515	23.56513	0.34133	0.59027
104	14.13548	23.56513	0.28936	0.53403
105	14.16071	23.51358	0.30116	0.53038
106	14.06539	23.73318	0.22304	0.40038
107	14.189	23.56297	0.3646	0.57597
108	14.16514	23.64095	0.37374	0.55564
109	14.26205	23.7384	0.29063	0.53349
110	14.25487	23.6885	0.27894	0.67779
111	14.28327	23.69557	0.28745	0.495
112	14.33341	23.68625	0.4085	0.50059
113	14.26733	23.65059	0.41073	0.53177
114	14.28527	23.51563	0.38076	0.57779
115	14.35737	23.73728	0.35578	0.58812
116	14.45586	23.74312	0.37204	0.49532
117	14.42092	23.74732	0.2782	0.52941
118	14.45142	23.74076	0.38161	0.47285
119	14.34808	23.64813	0.33145	0.49199
120	14.50283	23.74394	0.1884	0.57371
121	14.54685	23.74681	0.43198	0.51597

122	14.61029	23.73072	0.29722	0.54048
123	1.47E+01	23.83698	0.36227	0.4378
124	1.46E+01	23.77253	0.26853	0.61263
125	1.47E+01	23.91199	0.351	0.57425
126	1.47E+01	23.68952	0.47311	0.51091
127	1.46E+01	23.77386	0.27841	0.67973
128	1.47E+01	23.86168	0.32337	0.6093
129	1.46E+01	23.85901	0.38171	0.57037
130	1.47E+01	23.6553	0.26215	0.61467
131	1.47E+01	23.93361	0.32613	0.58801
132	1.48E+01	23.66237	0.27565	0.63973
133	1.49E+01	23.77509	0.32358	0.52253
134	1.49E+01	23.78872	0.41328	0.71897
135	1.48E+01	23.91588	0.39468	0.60855
136	1.48E+01	23.9873	0.38384	0.54833
137	1.48E+01	23.61687	0.45823	0.52995
138	1.50E+01	23.86547	0.31635	0.79176
139	1.49E+01	23.74588	0.2426	0.59876
140	1.49E+01	23.99704	0.33527	0.58779
141	1.50E+01	23.83493	0.42231	0.57263
142	14.95326	23.88278	0.23909	0.68929
143	14.99347	23.95349	0.40637	0.68639
144	15.03179	23.80562	0.37342	0.64951
145	15.2427	23.93955	0.35376	0.6251
146	15.12785	23.94642	0.29212	0.64016
147	15.12838	23.94591	0.34282	0.62736
148	15.26191	23.79476	0.30381	0.58048
149	15.02419	24.17298	0.39043	0.57876
150	15.18148	24.02829	0.48257	0.69639
151	15.15952	23.96179	0.34314	0.70112
152	15.16543	23.93853	0.3611	0.63586
153	15.24038	24.0244	0.43921	0.54575
154	15.30572	23.87664	0.31242	0.58134

155	15.37645	24.0493	0.39245	0.55758
156	15.23531	23.98935	0.3577	0.59844
157	15.29147	23.94939	0.28925	0.62811
158	15.35681	23.95052	0.49511	0.70349
159	15.41519	24.0287	0.34377	0.66166
160	15.33443	24.04274	0.34292	0.56328
161	15.32747	23.95236	0.33219	0.62951
162	15.34119	24.11918	0.38001	0.71747
163	15.54999	23.86813	0.39043	0.64682
164	15.44432	24.03567	0.24621	0.69671
165	15.51209	24.02389	0.3628	0.62252
166	15.50924	23.98351	0.43326	0.60693
167	15.59992	24.0618	0.36078	0.64005
168	15.57036	24.11591	0.49756	0.6051
169	15.53025	24.14613	0.35366	0.62177
170	15.56128	24.02778	0.40828	0.60844
171	15.63317	24.04735	0.40828	0.58629
172	15.47694	24.21704	0.36864	0.72682
173	15.61375	24.03393	0.4847	0.61263
174	15.65164	24.06303	0.42869	0.75047
175	15.7325	23.86413	0.44644	0.56242
176	15.62736	24.16478	0.38926	0.68736
177	15.56624	24.08793	0.30254	0.62349
178	15.63021	24.04991	0.47758	0.70327
179	15.5768	24.08916	0.51254	0.64704
180	15.74781	24.14982	0.43177	0.7466
181	15.70675	24.25188	0.43485	0.74295
182	15.78106	24.13835	0.44431	0.59941
183	15.90034	24.10484	0.45547	0.67102
184	15.76501	24.08814	0.41083	0.84639
185	15.76955	24.25229	0.42189	0.74058
186	15.79827	24.11724	0.31168	0.67521
187	15.85917	24.12164	0.566	0.81445

188	15.84239	24.09213	0.48172	0.75198
189	15.93286	24.22084	0.5169	0.67704
190	15.91765	24.10904	0.34037	0.80628
191	15.91829	24.15987	0.33942	0.63629
192	15.99598	24.18087	0.4188	0.76112
193	16.05541	24.14347	0.48746	0.74488
194	15.89369	24.15136	0.43549	0.81402
195	16.0115	24.24328	0.36832	0.64983
196	15.85875	24.16981	0.51817	0.73456
197	16.05858	24.3397	0.45239	0.79101
198	16.02575	24.3478	0.42593	0.77155
199	16.08803	24.35548	0.40414	0.79133
200	16.11537	24.08178	0.37938	0.71338
201	16.03736	24.18784	0.47449	0.75865
202	16.09647	24.17339	0.42954	0.71897
203	16.04813	24.15853	0.439	0.82316
204	16.27128	24.21745	0.41445	0.76768
205	16.05763	24.16079	0.49426	0.73402
206	16.14567	24.33335	0.53518	0.76058
207	16.09098	24.18395	0.49171	0.82348
208	16.24278	24.31982	0.49554	0.81649
209	16.04581	24.27637	0.478	0.70241
210	16.34729	24.26428	0.42794	0.68532
211	16.19897	24.25957	0.4881	0.79413
212	16.25503	24.24574	0.51243	0.68994
213	16.18092	24.12523	0.49415	0.80004
214	16.32723	24.08988	0.40095	0.79219
215	16.20172	24.14378	0.44017	0.81585
216	16.31625	24.06959	0.57737	0.83026
217	16.30886	24.04161	0.47651	0.6493
218	16.3665	24.18743	0.47226	0.71048
219	16.33261	24.23651	0.42901	0.78069
220	16.38307	24.19809	0.52338	0.83047

221	16.36871	24.39094	0.45228	0.82671
222	16.41791	24.15495	0.45313	0.74714
223	16.24204	24.18651	0.42794	0.79284
224	16.27192	24.20628	0.55558	0.80434
225	16.42445	24.38858	0.43953	0.7894
226	16.4007	24.34595	0.60458	0.86649
227	16.3267	24.41696	0.56802	0.78843
228	16.42076	24.30722	0.46961	0.77047
229	16.51238	24.28754	0.49405	0.85628
230	16.46256	24.17565	0.44707	0.84327
231	16.5507	24.21704	0.54474	0.65134
232	16.48736	24.37608	0.4559	0.81391
233	16.72677	24.46287	0.45664	0.81671
234	16.41125	24.43654	0.46982	0.85542
235	16.5773	24.42383	0.54804	0.74671
236	16.55439	24.33499	0.49798	0.78639
237	16.61245	24.31429	0.49756	0.7208
238	16.60295	24.38048	0.38852	0.81983
239	16.63874	24.48623	0.63848	0.76123
240	16.7007	24.41164	0.4322	0.89445
241	16.60612	24.4019	0.53752	0.86456
242	16.65721	24.27258	0.46429	0.91584
243	16.66861	24.37034	0.46174	0.81628
244	16.74293	24.47875	0.52359	0.92864
245	16.77586	24.40026	0.60511	0.7837
246	16.7424	24.45611	0.67791	0.81305
247	16.74134	24.48736	0.53369	0.84423
248	16.68476	24.4307	0.58949	0.90434
249	16.77808	24.55161	0.49075	0.80381
250	16.84912	24.45672	0.64836	0.88144
251	16.89314	24.39831	0.58534	0.81295
252	16.73744	24.54823	0.41795	0.76155
253	16.70767	24.38458	0.55335	0.90649

254	16.89092	24.46482	0.56153	0.83864
255	16.91256	24.48162	0.66994	0.81553
256	16.75464	24.63738	0.5644	0.83725
257	16.85524	24.39924	0.60925	0.75736
258	16.84944	24.43336	0.62838	0.88531
259	16.97315	24.63185	0.54984	0.91713
260	16.90105	24.36675	0.6202	0.84606
261	16.92037	24.57344	0.65038	0.77682
262	16.93093	24.55192	0.55452	0.78736
263	16.95341	24.56913	0.57131	0.90477
264	16.95151	24.30343	0.5457	0.75424
265	17.01084	24.43777	0.63083	0.79262
266	17.05137	24.40159	0.66207	0.87187
267	17.06404	24.42834	0.49426	0.91412
268	17.05781	24.52333	0.64571	0.80542
269	16.95373	24.54147	0.55696	0.86402
270	17.01833	24.46215	0.53943	0.90735
271	17.13645	24.52128	0.59586	0.91713
272	17.15239	24.35948	0.67621	0.90305
273	17.17192	24.50642	0.60575	0.94143
274	17.06172	24.5469	0.64475	0.90961
275	17.19441	24.5925	0.64326	0.93251
276	17.08906	24.49269	0.60691	0.9395
277	17.11904	24.3812	0.61255	0.96025
278	17.15936	24.51206	0.68811	0.97993
279	17.2361	24.4805	0.67642	0.84886
280	17.11101	24.5014	0.62403	0.90606
281	17.10521	24.6591	0.75985	0.93971
282	17.03343	24.51995	0.49288	0.92326
283	17.20243	24.59373	0.72658	0.82886
284	17.20391	24.51236	0.62328	0.83585
285	17.22333	24.59342	0.57588	0.95606
286	17.14954	24.51892	0.62126	0.95133

287	17.23557	24.54413	0.53815	0.93015
288	17.26334	24.64179	0.63444	1.00466
289	17.40954	24.67755	0.62923	1.01197
290	17.29648	24.61432	0.69778	0.99283
291	17.32868	24.68708	0.62689	0.91391
292	17.29764	24.76024	0.61297	1.06638
293	17.18184	24.72069	0.69257	1.05767
294	17.48354	24.68154	0.69938	0.94681
295	17.34282	24.58655	0.65857	0.85897
296	17.33881	24.73165	0.61042	1.00498
297	17.40415	24.67273	0.61053	0.95875
298	17.36278	24.39944	0.71287	0.95186
299	17.32382	24.69753	0.74072	0.86305
300	17.48913	24.61648	0.72956	1.06283
301	17.45989	24.63912	0.68992	1.04874
302	17.4695	24.44627	0.77228	0.99509
303	17.52523	24.73257	0.44888	0.96358
304	17.36056	24.66863	0.7388	1.08229
305	17.424	24.73903	0.61435	0.89488
306	17.49948	24.77182	0.83498	1.05519
307	17.50496	24.67335	0.66335	1.09939
308	17.49948	24.67386	0.72648	1.07498
309	17.56598	24.56729	0.65867	1.02175
310	17.55627	24.7794	0.71011	0.8909
311	17.57812	24.62252	0.54325	0.9981
312	17.6935	24.64373	0.62498	1.04659
313	17.54328	24.76977	0.67334	1.00584
314	17.65169	24.6508	0.73838	0.93326
315	17.57273	24.66259	0.69927	1.06132
316	17.68896	24.84888	0.59629	1.05713
317	17.4848	24.8126	0.69619	0.97885
318	17.61	24.74825	0.79587	1.09272
319	17.69138	24.72571	0.76442	1.00692

320	17.5189	24.90811	0.67674	1.16852
321	17.60409	24.8291	0.82212	0.95832
322	17.62488	24.78996	0.71606	1.04971
323	17.75514	24.8828	0.61818	1.06165
324	17.54444	24.89079	0.84795	1.10412
325	17.86155	24.80113	0.87633	1.05014
326	17.74849	24.82039	0.72137	1.01552
327	17.71587	24.86005	0.67026	1.02283
328	17.77309	24.78863	0.63115	1.06982
329	17.96774	24.78565	0.70979	1.06455
330	17.72601	24.88372	0.68205	1.07562
331	17.61179	24.9329	0.75889	1.09508
332	17.80338	24.93465	0.70586	0.96004
333	17.78174	24.75133	0.65644	1.07164
334	17.85321	25.07493	0.74646	1.18239
335	17.85342	25.01273	0.76846	1.17551
336	17.78132	24.86558	0.61117	1.10874
337	17.95381	24.91477	0.61605	1.07455
338	17.90377	24.92204	0.80172	1.13369
339	17.8056	24.77326	0.8691	1.20487
340	17.90377	24.8581	0.79726	1.17906
341	17.77953	24.88464	0.70756	1.11197
342	17.82471	24.77951	0.73774	1.17788
343	17.929	24.87726	0.64347	1.21218
344	17.74501	24.97512	0.70331	1.17336
345	17.78808	24.92481	0.75815	1.08154
346	17.99001	24.82838	0.8098	1.18229
347	17.99846	24.91333	0.70937	1.16734
348	17.90736	24.92481	0.77834	1.05949
349	17.96901	24.98875	0.76962	1.18164
350	17.83632	24.89151	0.78323	1.08197
351	17.97112	24.94028	0.72063	1.02745
352	18.05082	24.99756	0.78312	1.19798

353	18.13125	25.06724	0.66197	1.0367
354	18.09336	24.95217	0.80608	1.16476
355	18.13062	24.94428	0.81394	1.22089
356	18.13695	24.96949	0.7659	1.24938
357	17.87633	24.91948	0.81394	1.10057
358	17.50148	24.87337	0.74019	1.02132
359	17.78618	24.97912	0.79566	1.05444
360	17.84856	24.94428	0.72467	1.16788
361	17.84698	25.04245	0.78089	1.10863
362	18.00258	24.96477	0.75464	1.17659
363	18.04058	24.81127	0.68141	1.19293
364	18.18235	25.01263	0.79067	1.10143
365	18.04733	24.98906	0.78131	1.21863
366	18.02232	25.24114	0.83881	1.15358
367	18.2309	25.16357	0.80193	1.21089
368	18.15954	24.94961	0.78535	1.20551
369	18.0866	25.00494	0.74178	1.20605
370	18.21422	25.23325	0.68832	1.32056
371	18.18963	25.12258	0.78812	1.16798
372	18.13917	25.02943	0.77345	1.06455
373	18.24853	25.24892	0.89567	1.20659
374	18.20736	25.0614	0.96985	1.15863
375	18.19459	25.11049	0.83552	1.20852
376	18.25529	25.13324	0.89195	1.19132
377	18.37795	25.00853	0.88323	1.22669
378	18.32147	25.08589	0.8775	1.30841
379	18.28527	24.99746	0.80618	1.15971
380	18.40054	24.94858	0.85805	1.19594
381	18.43453	25.0489	0.96252	1.17282
382	18.42133	25.01775	0.79726	1.29121
383	18.3543	25.11663	0.73732	1.19831
384	18.46271	25.12207	0.85698	1.25121
385	18.37753	25.12442	0.75602	1.37217

386	18.52436	25.15701	0.84019	1.1896
387	18.38238	25.06007	0.94211	1.20788
388	18.44171	25.08057	0.89864	1.21551
389	18.3447	25.09891	1.03362	1.27207
390	18.38956	25.15947	0.83424	1.17218
391	18.36845	25.06909	0.83743	1.35561
392	18.59941	25.14369	0.95433	1.27045
393	18.38829	25.16418	0.78684	1.27981
394	18.4738	25.21091	0.7794	1.26368
395	18.34565	24.99941	0.85231	1.22314
396	18.49132	25.22792	0.81809	1.20239
397	18.43537	25.09143	0.81139	1.30131
398	18.42767	25.21378	0.85943	1.21745
399	18.641	25.19923	0.78227	1.24067
400	18.46166	25.10987	0.83637	1.29873
401	18.50948	25.082	0.86655	1.26282
402	18.49586	25.02421	0.84551	1.20196
403	18.44361	25.3435	0.91129	1.30658
404	18.48171	25.16213	0.86974	1.19755
405	18.58326	25.2977	0.84062	1.26443
406	18.56215	25.28602	0.8792	1.17562
407	18.55677	25.17822	0.79513	1.28164
408	18.59361	25.13047	0.8572	1.26873
409	18.58284	25.13037	0.81585	1.22024
410	18.60258	25.22105	0.94286	1.25411
411	18.69906	25.21081	0.80098	1.28411
412	18.62675	25.17515	0.84157	1.24701
413	18.54273	25.24073	0.84721	1.35851
414	18.49839	25.35385	0.82531	1.26519
415	18.65863	25.29729	0.76293	1.32034
416	18.844	25.06601	0.89801	1.39109
417	18.71352	25.25384	0.86347	1.19712
418	18.64269	25.31563	0.65676	1.30895

419	18.68196	25.09307	0.75506	1.33303
420	18.7795	25.41001	0.86092	1.38002
421	18.54853	25.35017	0.81097	1.4069
422	18.80219	25.28274	0.70033	1.32615
423	18.7016	25.28192	0.71734	1.314
424	18.72376	25.07042	0.73849	1.38765
425	18.72904	25.19451	0.79077	1.35056
426	18.79913	25.25651	0.78472	1.35851
427	18.77644	25.34668	0.88164	1.3783
428	18.82426	25.23673	0.83169	1.3897
429	18.73791	25.17084	0.68216	1.37755
430	18.79502	25.23202	0.9521	1.3454
431	18.732	25.29596	0.90013	1.33099
432	18.76134	25.27669	0.75219	1.4812
433	18.70339	25.37363	0.84487	1.26981
434	18.78995	25.22689	0.84189	1.39927
435	18.9181	25.24267	0.87941	1.42819
436	18.84959	25.33797	0.79747	1.41572
437	18.94333	25.23991	0.92734	1.40529
438	18.7225	25.44188	0.78769	1.25529
439	18.83344	25.25989	0.92659	1.37733
440	18.89065	25.35355	0.96666	1.23121
441	18.99917	25.39904	0.85199	1.44615
442	18.8042	25.46463	1.03478	1.35024
443	18.88158	25.25128	0.89014	1.33303
444	18.93161	25.16152	1.07092	1.30744
445	18.86448	25.30272	0.78025	1.22755
446	18.93478	25.34473	0.92107	1.2439
447	18.89667	25.28079	0.90226	1.37776
448	19.02852	25.3059	1.0266	1.35174
449	18.98566	25.38449	0.92043	1.38561
450	18.93066	25.17453	0.89439	1.44346
451	19.08277	25.36215	0.91395	1.34873

452	18.91979	25.36451	0.93255	1.35529
453	18.95389	25.39966	0.84147	1.2654
454	19.05142	25.25835	0.7861	1.42324
455	18.90322	25.39279	0.91692	1.31002
456	18.93847	25.30272	0.86017	1.38808
457	19.01912	25.39454	0.86485	1.3611
458	19.089	25.48491	0.8793	1.40303
459	19.02609	25.31153	0.85018	1.36572
460	18.98851	25.39146	0.88143	1.34314
461	19.00793	25.44075	0.93446	1.32873
462	19.08636	25.37035	0.91682	1.34217
463	19.19361	25.4345	0.88749	1.37228
464	18.9846	25.47385	0.98239	1.29271
465	19.00835	25.41954	0.91522	1.34733
466	19.20449	25.35775	0.92596	1.45206
467	19.22074	25.39177	0.89216	1.42464
468	19.23837	25.46616	0.91597	1.34583
469	19.2029	26.06387	0.98154	1.43421
470	19.11307	25.52672	0.99344	1.40002
471	19.20575	25.35426	0.96677	1.42314
472	19.11508	25.27618	0.91299	1.36733
473	19.1914	25.38726	0.95571	1.41873
474	19.3244	25.35129	0.89716	1.44131
475	19.42204	25.32414	0.99971	1.48819
476	19.24101	25.55203	0.80661	1.5198
477	19.27162	25.50951	0.93287	1.36765
478	19.33464	25.56074	0.83615	1.49303
479	19.26318	25.30559	0.96921	1.43109
480	19.37718	25.49332	0.95784	1.47894
481	18.97531	25.5382	0.89886	1.5084
482	18.60891	25.58718	0.8167	1.51184
483	18.77865	25.53676	0.9741	1.38712
484	18.85814	25.35088	0.99801	1.43529

485	18.8004	25.51893	0.97569	1.37991
486	18.94544	25.43091	0.92139	1.30271
487	19.07486	25.67715	0.9555	1.24734
488	19.00445	25.47795	0.92957	1.39432
489	19.18865	25.52529	1.01215	1.36927
490	19.19857	25.41657	0.97325	1.37905
491	19.11117	25.64036	0.97081	1.44658
492	19.14885	25.49936	1.04191	1.40808
493	19.09713	25.59282	0.90375	1.31325
494	19.04456	25.57119	1.04488	1.50679
495	19.20501	25.61085	1.01417	1.40314
496	19.30804	25.51904	0.90258	1.48055
497	19.15445	25.69939	0.9978	1.477
498	19.25969	25.55306	0.93085	1.40066
499	19.46174	25.57734	1.00811	1.53636
500	19.26708	25.44884	0.92543	1.44808
501	19.20512	25.63012	1.00216	1.5284
502	19.39291	25.45438	0.97229	1.35368
503	19.3244	25.613	0.93212	1.41733
504	19.31406	25.47733	1.05328	1.6085
505	19.46174	25.4925	0.96103	1.45582
506	19.5275	25.63678	1.01077	1.49496
507	19.40642	25.5591	0.94944	1.38335
508	19.39027	25.51586	1.03393	1.42088
509	19.41054	25.46831	1.01937	1.46055
510	19.59527	25.53758	1.01969	1.52421
511	19.34657	25.5384	1.03213	1.55646
512	19.4801	25.51391	1.04371	1.55829
513	19.48749	25.46001	0.97665	1.47496
514	19.51367	25.50848	1.03478	1.52399
515	19.49646	25.56044	1.0385	1.57485
516	19.57954	25.62356	1.09759	1.56947
517	19.52613	25.63483	1.03553	1.50442

518	19.45297	25.56494	1.01119	1.3997
519	19.51631	26.55573	0.99801	1.48152
520	19.56613	25.696	0.92319	1.4641
521	19.33971	25.66137	0.93999	1.55098
522	19.54756	25.51576	1.07623	1.49432
523	19.63253	25.59405	0.96815	1.59055
524	19.43461	25.69734	0.97899	1.54517
525	19.49372	25.52426	1.0198	1.58571
526	19.55547	25.69088	1.16519	1.47959
527	19.65871	25.52139	1.09441	1.56872
528	19.47746	25.66854	1.09249	1.58711
529	19.64552	25.50151	0.97665	1.54947
530	19.45751	25.77255	1.07772	1.49088
531	19.53246	25.69949	1.07602	1.48905
532	19.59464	25.59855	1.10344	1.50475
533	19.76839	25.75687	1.00205	1.54485
534	19.54851	25.70594	1.06486	1.63012
535	19.72342	25.60604	0.98537	1.57109
536	19.71234	25.45694	0.98707	1.51475
537	19.67708	25.61362	1.03436	1.61625
538	19.54207	25.63217	1.09579	1.66173
539	19.71244	25.63196	1.21174	1.70119
540	19.76533	25.45417	1.03989	1.56087
541	19.63464	25.32885	1.1282	1.67538
542	19.69196	25.60347	1.02501	1.61872
543	19.56138	25.70615	1.03138	1.63194
544	19.64319	25.60214	1.06029	1.70743
545	19.8579	25.6501	1.03585	1.67904
546	19.6945	25.60644	1.08856	1.68667
547	19.67708	25.54343	1.00396	1.68485
548	19.67571	25.61895	1.08622	1.76022
549	19.78486	25.47672	1.07549	1.69388
550	19.72859	25.68207	1.21375	1.57517

551	19.78887	25.62141	1.05732	1.65119
552	19.70094	25.52273	1.05498	1.67055
553	19.73165	25.54179	1.0639	1.57184
554	19.94182	25.64497	1.09101	1.66119
555	19.65248	25.60983	1.01023	1.69979
556	19.79995	25.63544	1.17124	1.63388
557	19.79837	25.7001	1.01385	1.64775
558	19.71909	25.79653	1.03776	1.69571
559	19.76121	25.47395	1.02756	1.64689
560	19.79003	25.65071	1.06157	1.62291
561	19.72711	25.75042	1.00343	1.67033
562	19.76786	25.71722	1.09387	1.7442
563	19.88472	25.67367	1.1163	1.60399
564	19.8863	25.66864	0.98909	1.56679
565	19.8389	25.63801	1.04169	1.66936
566	20.00516	25.86887	0.95433	1.70065
567	19.81557	25.80544	1.17603	1.63431
568	19.85125	25.78895	0.98983	1.58614
569	19.85706	25.64169	1.15466	1.56227
570	19.96104	25.84797	0.99536	1.70087
571	19.7706	25.82963	1.11343	1.58851
572	19.7421	25.77665	1.0384	1.69216
573	19.87184	25.88219	1.14754	1.64463
574	19.95396	25.72224	0.86836	1.56162
575	19.8921	25.71045	0.93892	1.74474
576	19.89052	25.68586	0.93754	1.70947
577	19.9148	25.725	0.9504	1.71226
578	19.93665	25.87728	1.09334	1.63635
579	19.92472	25.68484	1.08782	1.67442
580	20.09731	25.67766	0.95401	1.62689
581	20.10375	25.72685	1.0266	1.70076
582	19.94341	25.69877	1.01948	1.59808
583	20.03904	25.85565	1.10057	1.66087

584	20.02511	25.84254	1.01991	1.66581
585	20.04527	25.85258	1.0334	1.61474
586	20.1825	25.783	1.04127	1.68334
587	19.99534	25.77183	1.09632	1.67882
588	19.99967	25.75667	1.04828	1.64259
589	20.0401	25.8035	1.01066	1.62098
590	20.05995	25.77747	1.00322	1.65549
591	20.12782	25.82747	1.03978	1.61829
592	19.99154	25.74929	1.06242	1.64452
593	20.13679	25.77388	1.06497	1.58334
594	20.02691	25.8657	1.12491	1.68076
595	20.0002	25.71998	1.19728	1.55937
596	19.96484	25.81969	1.06986	1.5827
597	20.23613	25.77019	1.08792	1.63775
598	20.15263	25.90453	1.0265	1.80344
599	20.15843	25.73125	1.06231	1.63571
600	20.27666	25.63503	1.07443	1.64926
601	20.1445	25.84397	1.06826	1.76549
602	20.03894	25.8743	1.1027	1.7414
603	20.09573	25.895	1.11609	1.74785
604	19.91786	25.8077	1.03553	1.64764
605	19.99566	25.81692	1.13787	1.68517
606	20.023	25.67377	1.06624	1.70441
607	20.03809	25.86775	1.08835	1.70441
608	20.11178	25.86303	1.13851	1.65001
609	19.96853	25.87953	1.25542	1.87269
610	20.01772	25.80483	1.14903	1.69474
611	20.07831	25.79807	1.13734	1.72474
612	20.10534	25.89265	1.10153	1.66786
613	20.07494	25.88875	1.09961	1.82559
614	19.99576	26.02012	1.07825	1.69237
615	20.06765	25.91078	1.13575	1.71721
616	19.88377	25.7455	1.16083	1.69667

617	19.87944	25.86057	1.2924	1.69495
618	20.04907	25.83536	1.30452	1.81936
619	20.03282	25.66936	1.18782	1.63173
620	20.16909	26.01858	1.11896	1.74957
621	20.17849	25.64877	1.1028	1.87441
622	20.0287	26.07289	1.05955	1.75345
623	20.04876	25.74775	1.2146	1.7171
624	20.14197	25.92226	1.00471	1.7542
625	20.13046	25.79448	1.22141	1.73742
626	20.12624	25.81221	1.11385	1.76323
627	20.17152	25.8452	1.13394	1.73269
628	20.20889	25.95034	1.21078	1.75388
629	20.30221	25.85299	1.18644	1.82011
630	20.12085	25.80975	1.02713	1.80495
631	19.99893	25.92001	1.08803	1.79699
632	20.2509	25.85258	1.13883	1.89925
633	20.06533	25.84049	1.26636	1.73527
634	19.98975	25.84643	1.20461	1.84591
635	20.1825	26.07576	1.25042	1.90591
636	20.31044	25.84387	1.0791	1.77108
637	20.26589	25.88137		1.88882
638	20.10175	25.92308		1.7442
639	20.27117	25.83352		1.8042
640	20.08686	25.73218		1.79097
641	20.21681	25.78884		1.86452
642	20.36565	25.83198		1.72108
643	20.14777	25.85371		1.78226
644	20.17986	25.82778		1.76646
645	20.28331	25.97011		1.75635
646	20.3344	25.93117		1.80516
647	20.30295	25.93281		1.8329
648	20.19823	25.9158		1.70495
649	20.13415	25.94173		1.82602

650	20.17004	25.94019		1.77882
651	20.30537	26.00475		1.81484
652	20.22209	25.90259		1.88613
653	20.3591	25.89131		1.62711
654	20.34538	25.81671		1.71538
655	20.24288	25.72859		1.62506
656	20.34686	26.03897		1.71958
657	20.32321	26.12597		1.75764
658	20.3343	26.18192		1.78495
659	20.27455	26.11357		1.6971
660	20.22071	26.09431		1.87527
661	20.29123	26.18797		1.77516
662	20.09404	26.181		1.82441
663	20.22557	26.08734		1.87645
664	20.33514	26.1024		1.72646
665	20.37367	26.06695		1.8057
666	20.38782	26.16911		1.79409
667	20.19179	26.01274		1.92527
668	20.30907	26.01633		1.90892
669	20.41885	26.17649		1.83914
670	20.58521	26.02545		1.76172
671	20.49707	26.05352		1.8815
672	20.24879	26.24043		2.00591
673	20.3818	25.97391		1.88892
674	20.192	26.17967		1.93516
675	20.2584	26.10035		1.93946
676	20.27096	26.03313		1.83495
677	20.32448	26.05086		1.95322
678	20.55502	26.05434		1.8057
679	20.50636	25.90586		1.94903
680	20.58965	25.93814		1.88301
681	20.28975	26.18407		1.85742
682	20.29957	26.12679		1.92806

683	20.44271	26.22588		1.80592
684	20.38919	25.97524		1.91656
685	20.3952	25.90545		1.86505
686	20.3951	25.94573		1.99096
687	20.45727	26.01715		1.82688
688	20.40555	25.95987		1.90968
689	20.47839	25.99788		1.91892
690	20.52821	26.10456		1.99774
691	20.56896	26.04799		2.0087
692	20.47005	25.84295		1.96935
693	20.53887	25.97329		1.91688
694	20.54763	26.036		1.97376
695	20.2945	26.03846		1.93247
696	20.54362	26.06357		2.0673
697	20.54837	26.10456		1.99107
698	20.43796	25.99286		1.95828
699	20.53159	26.06705		2.02343
700	20.48039	26.07094		1.90602
701	20.47163	25.97052		1.90054
702	20.6058	26.06582		1.82301
703	20.58469	26.06162		1.93086
704	20.47269	25.99604		1.93537
705	20.6153	25.87471		1.95247
706	20.54996	25.99051		1.80065
707	20.59767	26.07617		1.97752
708	20.49454	26.16553		1.9158
709	20.52388	25.9407		1.93505
710	20.77459	25.92482		2.03741
711	20.55682	25.82665		1.89193
712	20.49633	25.86098		1.95053
713	20.56231	25.82881		2.07225
714	20.54267	25.97431		2.00118
715	20.4274	26.08683		1.90903

716	20.70017	26.02186		1.95344
717	20.54214	25.96489		1.94849
718	20.72751	25.96919		1.93
719	20.5812	26.02278		1.90935
720	20.65098	26.19504		1.9186
721	20.50889	25.85555		1.8715
722	20.73627	26.09052		1.98096
723	20.92565	25.90689		2.07096
724	20.9647	26.04318		1.97537
725	20.81576	25.87502		2.03526
726	20.6249	25.70758		2.13504
727	20.79507	25.81856		2.00612
728	20.78525	25.91878		2.03311
729	20.69764	25.83413		1.9872
730	20.74355	26.01684		2.09107
731	20.88754	25.86969		1.90839
732	20.76973	25.95771		1.99462
733	20.6742	26.11501		1.77226
734	20.69658	26.04256		1.91236
735	20.80605	26.03723		1.94172
736	20.70302	26.0523		1.98784
737	20.80858	26.00024		1.98161
738	20.86801	26.0277		2.05472
739	20.73416	26.06572		2.10107
740	20.44513	26.00249		2.02128
741	20.3096	25.94398		1.98247
742	20.50108	25.9613		2.0444
743	20.73374	26.11275		1.98548
744	20.43162	25.92185		1.95957
745	20.6798	26.00004		2.12999
746	20.80035	25.93671		1.92462
747	20.61276	25.93712		2.08483
748	20.77723	26.15149		2.01376

749	20.71463	26.07146		2.07021
750	20.81829	25.94665		2.10085
751	20.79422	26.08611		2.04494
752	20.78187	26.00372		2.00408
753	20.714	26.10097		2.08182
754	20.90696	26.00608		2.18902
755	20.84384	25.52816		2.12805
756	20.87857	25.7042		2.02021
757	20.75992	25.68422		2.11752
758	20.93219	25.69006		1.94828
759	20.90812	25.98979		2.01655
760	20.95446	25.86426		2.16031
761	20.85534	25.60624		2.17483
762	20.93789	25.90382		2.01602
763	20.93958	25.7499		2.08021
764	20.98803	25.91222		2.0658
765	20.88194	25.86979		2.14246
766	20.9266	25.90832		2.14053
767	20.88743	25.84233		2.09741
768	20.86653	26.01336		2.12235
769	20.87213	26.02483		2.11063
770	20.95668	25.87389		2.0273
771	21.09866	25.88967		2.1373
772	20.85598	25.94614		2.11085
773	21.03701	26.01561		2.14139
774	21.01463	26.17085		2.1115
775	20.98434	25.85545		2.0572
776	21.09697	25.91171		2.12838
777	20.87719	25.93066		2.26203
778	21.02519	26.15097		2.20063
779	20.78134	26.02576		2.14128
780	21.05633	26.07781		2.16547
781	20.95647	26.12659		2.18859

782	21.03722	26.12935		2.17741
783	21.05633	25.93169		2.15751
784	21.00925	26.02104		2.21181
785	21.08578	26.04594		2.16902
786	21.15703	26.01633		2.1716
787	21.03596	25.8908		2.33568
788	21.09919	26.03764		2.24945
789	21.08209	26.0982		2.19375
790	21.10119	26.05578		2.26912
791	21.12125	26.05967		2.27611
792	21.13012	26.06695		2.19698
793	21.04292	26.12484		2.20902
794	20.95964	26.08416		2.28439
795	20.91625	26.00629		2.14676
796	20.98476	26.02668		2.25515
797	21.00123	26.02985		2.12623
798	21.27019	26.10005		2.16515
799	21.07871	26.0689		2.18343
800	21.03226	25.87143		2.23504
801	20.88954	25.86723		2.24837
802	21.10278	26.04451		2.31418
803	21.15344	25.92134		2.2517
804	21.03004	26.05363		2.27138
805	21.0805	26.10179		2.23138
806	21.06361	25.93322		2.29106
807	21.15038	26.02453		2.35138
808	21.21045	26.17956		2.2187
809	21.13909	26.09431		2.27923
810	21.06382	25.88762		2.26633
811	21.13318	25.99317		2.21697
812	21.18226	26.02739		2.40793
813	21.22153	26.00864		2.25439
814	21.37037	26.0482		2.3374

815	21.39507	26.07146		2.30837
816	21.31844	25.98487		2.29063
817	21.25362	26.07638		2.36589
818	21.24285	26.09185		2.38406
819	21.38642	26.14103		2.33837
820	21.46252	26.07433		2.34138
821	21.45714	26.17331		2.32213
822	21.43181	26.01079		2.36009
823	21.4374	26.16911		2.28289
824	21.39296	25.98302		2.38837
825	21.3501	26.13028		2.32622
826	21.48511	25.91058		2.41503
827	21.51731	26.01008		2.35933
828	21.50105	25.99317		2.26654
829	21.31675	25.77491		2.29579
830	21.44067	26.06295		2.33708
831	21.41629	25.91181		2.38912
832	21.55584	25.87338		2.36675
833	21.49567	26.09113		2.39503
834	21.48976	26.00547		2.30235
835	21.52058	25.94255		2.41643
836	21.48923	25.96745		2.4074
837	21.35971	26.16932		2.40374
838	21.29215	25.79181		2.41084
839	21.54338	26.06808		2.34665
840	21.57621	26.08755		2.44234
841	21.32551	25.93579		2.4703
842	21.39106	25.9323		2.42686
843	21.32899	25.93087		2.43353
844	21.49947	26.02668		2.51374
845	21.43339	25.88322		2.3703
846	21.49863	25.99563		2.3745
847	21.49324	26.11798		2.4589

848	21.50971	25.96899		2.36267
849	21.47435	25.94941		2.41912
850	21.38758	25.87164		2.39385
851	21.33174	26.21369		2.3489
852	21.5095	26.00106		2.42836
853	21.48216	25.98118		2.43396
854	21.51087	25.92011		2.41922
855	21.44078	25.9735		2.41632
856	21.40679	25.96222		2.5061
857	21.51203	25.96192		2.38181
858	21.60155	25.91601		2.33708
859	21.48195	25.95894		2.41138
860	21.50422	25.99348		2.56524
861	21.63902	26.09062		2.47363
862	21.61421	26.08703		2.39245
863	21.4697	26.1271		2.50137
864	21.54254	26.06674		2.45826
865	21.56059	26.01018		2.54761
866	21.47445	26.03887		2.4574
867	21.44986	26.1273		2.41944
868	21.52702	25.87707		2.45879
869	21.59975	25.98425		2.38858
870	21.42357	26.07023		2.57868
871	21.4868	25.92093		2.56761
872	21.5475	26.05311		2.48524
873	21.65201	25.90996		2.48621
874	21.41798	25.97462		2.51739
875	21.46105	26.06644		2.55331

Table Apx. 2. 11: Time course of percent vesicle fusion of all constructs at pH 6.3 in lipid:protein 600:1.

Time (s)	FPHM	G10V	L9R	V2E
1	6.40477	12.67607	0.14249	0.28383
2	6.60376	13.60046	0.1952	0.35952
3	7.04299	15.43961	0.09445	0.10566
4	7.51559	17.02462	0.17075	0.15577
5	7.97551	17.82656	0.10444	0.28522
6	8.18399	18.85393	0.13792	0.18985
7	8.39659	19.59592	0.14971	0.16437
8	8.59072	19.80363	0.29393	0.22243
9	8.72699	20.09618	0.14355	0.19437
10	8.79476	20.51303	0.11113	0.18759
11	9.54055	20.82496	0.1156	0.242
12	9.11282	21.04691	0.14334	0.18663
13	9.15768	21.56192	0.14929	0.21458
14	9.40226	21.54174	0.2342	0.2449
15	9.384	21.8263	0.0801	0.23759
16	9.52946	21.68766	0.2223	0.25662
17	9.58203	21.7021	0.22719	0.26953
18	9.75357	21.59513	0.1191	0.23544
19	9.74153	21.58057	0.12506	0.19878
20	9.73383	22.08299	0.17373	0.16265
21	9.84002	22.55271	0.12527	0.18953
22	9.99045	22.04323	0.2088	0.29888
23	10.20896	22.21866	0.03812	0.39501
24	10.24675	22.23311	0.18595	0.22652
25	10.36402	22.30996	0.22581	0.37941
26	10.40181	22.41171	0.24727	0.21792
27	10.5687	22.35761	0.25312	0.34479
28	10.7413	22.3945	0.33485	0.30297
29	10.66403	22.48283	0.15556	0.33081

30	10.73528	22.44983	0.20838	0.37963
31	10.87494	22.45475	0.05449	0.42178
32	10.82311	22.54103	0.06437	0.34372
33	10.8932	22.52453	0.23027	0.37769
34	10.9901	22.64914	0.17851	0.30383
35	10.99401	22.48129	0.17724	0.37307
36	11.16765	22.64648	0.20785	0.24834
37	11.27121	22.67834	0.21348	0.33404
38	11.28673	22.66277	0.2918	0.37791
39	11.44274	22.77221	0.21922	0.29748
40	11.32156	22.64955	0.2037	0.43522
41	11.56509	22.8716	0.22804	0.40189
42	11.57279	22.69771	0.21964	0.26609
43	11.49954	22.85787	0.27852	0.36436
44	11.55358	22.88124	0.25641	0.38974
45	11.78201	22.82078	0.20593	0.28867
46	11.75721	22.9712	0.16342	0.31286
47	11.82297	22.89425	0.3188	0.20738
48	12.00665	22.97172	0.18106	0.29533
49	11.96168	23.07183	0.09052	0.25942
50	12.00707	22.96782	0.14025	0.54113
51	12.1861	22.97961	0.25461	0.37748
52	12.07537	22.98391	0.10423	0.37329
53	12.21777	23.14274	0.24185	0.22136
54	12.09511	23.11661	0.08425	0.10093
55	12.29958	23.13167	0.03791	0.23254
56	12.34486	22.98145	0.16076	0.21189
57	12.29725	23.00615	0.18436	0.27297
58	12.31932	23.09161	0.15694	0.33221
59	1.24E+01	23.27401	0.24239	0.26673
60	1.23E+01	23.0996	0.20891	0.282
61	1.26E+01	22.95747	0.37172	0.37436
62	12.60813	22.85224	0.39245	0.25265

63	12.57667	22.4193	0.34314	0.38404
64	12.67833	22.28854	0.31433	0.43436
65	12.75971	22.1083	0.24249	0.36178
66	12.712	22.34757	0.2105	0.31952
67	12.90043	22.37831	0.22432	0.4407
68	13.06046	22.33763	0.224	0.35028
69	13.0101	22.50138	0.28373	0.35329
70	13.00071	22.48396	0.20551	0.44404
71	12.95447	22.71431	0.20264	0.43748
72	12.91383	22.78706	0.16406	0.38673
73	13.09909	22.93175	0.28766	0.44296
74	13.05718	22.94385	0.36503	0.4692
75	13.12506	23.02408	0.27809	0.38984
76	13.17119	23.00666	0.25408	0.55833
77	13.14986	23.11528	0.20678	0.44264
78	13.22175	23.24326	0.09742	0.4592
79	13.36626	23.15709	0.27172	0.41103
80	13.36225	23.1783	0.25535	0.37952
81	13.41567	23.13321	0.20072	0.5107
82	13.29522	23.36131	0.14419	0.42941
83	13.44839	23.18568	0.31423	0.40812
84	13.39202	23.41316	0.1851	0.40898
85	13.50645	23.47997	0.22432	0.40984
86	13.55596	23.369	0.13675	0.4636
87	13.62489	23.52731	0.29159	0.55446
88	13.4562	23.25659	0.2545	0.55414
89	13.59322	23.4356	0.28043	0.46113
90	13.6593	23.32914	0.14387	0.60553
91	13.77552	23.31848	0.2629	0.52823
92	13.59375	23.37904	0.34314	0.39329
93	13.71282	23.40507	0.28989	0.51812
94	13.81183	23.49514	0.16374	0.55468
95	13.73509	23.51276	0.3172	0.40619

96	13.85216	23.42771	0.3848	0.55941
97	13.90568	23.5059	0.18266	0.46597
98	13.86525	23.61052	0.27459	0.60812
99	14.02559	23.68563	0.28394	0.49812
100	13.94758	23.58634	0.39	0.60586
101	13.9877	23.63132	0.20051	0.5378
102	13.94684	23.59474	0.25854	0.485
103	14.05515	23.56513	0.34133	0.59027
104	14.13548	23.56513	0.28936	0.53403
105	14.16071	23.51358	0.30116	0.53038
106	14.06539	23.73318	0.22304	0.40038
107	14.189	23.56297	0.3646	0.57597
108	14.16514	23.64095	0.37374	0.55564
109	14.26205	23.7384	0.29063	0.53349
110	14.25487	23.6885	0.27894	0.67779
111	14.28327	23.69557	0.28745	0.495
112	14.33341	23.68625	0.4085	0.50059
113	14.26733	23.65059	0.41073	0.53177
114	14.28527	23.51563	0.38076	0.57779
115	14.35737	23.73728	0.35578	0.58812
116	14.45586	23.74312	0.37204	0.49532
117	14.42092	23.74732	0.2782	0.52941
118	14.45142	23.74076	0.38161	0.47285
119	14.34808	23.64813	0.33145	0.49199
120	14.50283	23.74394	0.1884	0.57371
121	14.54685	23.74681	0.43198	0.51597
122	14.61029	23.73072	0.29722	0.54048
123	1.47E+01	23.83698	0.36227	0.4378
124	1.46E+01	23.77253	0.26853	0.61263
125	1.47E+01	23.91199	0.351	0.57425
126	1.47E+01	23.68952	0.47311	0.51091
127	1.46E+01	23.77386	0.27841	0.67973
128	1.47E+01	23.86168	0.32337	0.6093

129	1.46E+01	23.85901	0.38171	0.57037
130	1.47E+01	23.6553	0.26215	0.61467
131	1.47E+01	23.93361	0.32613	0.58801
132	1.48E+01	23.66237	0.27565	0.63973
133	1.49E+01	23.77509	0.32358	0.52253
134	1.49E+01	23.78872	0.41328	0.71897
135	1.48E+01	23.91588	0.39468	0.60855
136	1.48E+01	23.9873	0.38384	0.54833
137	1.48E+01	23.61687	0.45823	0.52995
138	1.50E+01	23.86547	0.31635	0.79176
139	1.49E+01	23.74588	0.2426	0.59876
140	1.49E+01	23.99704	0.33527	0.58779
141	1.50E+01	23.83493	0.42231	0.57263
142	14.95326	23.88278	0.23909	0.68929
143	14.99347	23.95349	0.40637	0.68639
144	15.03179	23.80562	0.37342	0.64951
145	15.2427	23.93955	0.35376	0.6251
146	15.12785	23.94642	0.29212	0.64016
147	15.12838	23.94591	0.34282	0.62736
148	15.26191	23.79476	0.30381	0.58048
149	15.02419	24.17298	0.39043	0.57876
150	15.18148	24.02829	0.48257	0.69639
151	15.15952	23.96179	0.34314	0.70112
152	15.16543	23.93853	0.3611	0.63586
153	15.24038	24.0244	0.43921	0.54575
154	15.30572	23.87664	0.31242	0.58134
155	15.37645	24.0493	0.39245	0.55758
156	15.23531	23.98935	0.3577	0.59844
157	15.29147	23.94939	0.28925	0.62811
158	15.35681	23.95052	0.49511	0.70349
159	15.41519	24.0287	0.34377	0.66166
160	15.33443	24.04274	0.34292	0.56328
161	15.32747	23.95236	0.33219	0.62951

162	15.34119	24.11918	0.38001	0.71747
163	15.54999	23.86813	0.39043	0.64682
164	15.44432	24.03567	0.24621	0.69671
165	15.51209	24.02389	0.3628	0.62252
166	15.50924	23.98351	0.43326	0.60693
167	15.59992	24.0618	0.36078	0.64005
168	15.57036	24.11591	0.49756	0.6051
169	15.53025	24.14613	0.35366	0.62177
170	15.56128	24.02778	0.40828	0.60844
171	15.63317	24.04735	0.40828	0.58629
172	15.47694	24.21704	0.36864	0.72682
173	15.61375	24.03393	0.4847	0.61263
174	15.65164	24.06303	0.42869	0.75047
175	15.7325	23.86413	0.44644	0.56242
176	15.62736	24.16478	0.38926	0.68736
177	15.56624	24.08793	0.30254	0.62349
178	15.63021	24.04991	0.47758	0.70327
179	15.5768	24.08916	0.51254	0.64704
180	15.74781	24.14982	0.43177	0.7466
181	15.70675	24.25188	0.43485	0.74295
182	15.78106	24.13835	0.44431	0.59941
183	15.90034	24.10484	0.45547	0.67102
184	15.76501	24.08814	0.41083	0.84639
185	15.76955	24.25229	0.42189	0.74058
186	15.79827	24.11724	0.31168	0.67521
187	15.85917	24.12164	0.566	0.81445
188	15.84239	24.09213	0.48172	0.75198
189	15.93286	24.22084	0.5169	0.67704
190	15.91765	24.10904	0.34037	0.80628
191	15.91829	24.15987	0.33942	0.63629
192	15.99598	24.18087	0.4188	0.76112
193	16.05541	24.14347	0.48746	0.74488
194	15.89369	24.15136	0.43549	0.81402

195	16.0115	24.24328	0.36832	0.64983
196	15.85875	24.16981	0.51817	0.73456
197	16.05858	24.3397	0.45239	0.79101
198	16.02575	24.3478	0.42593	0.77155
199	16.08803	24.35548	0.40414	0.79133
200	16.11537	24.08178	0.37938	0.71338
201	16.03736	24.18784	0.47449	0.75865
202	16.09647	24.17339	0.42954	0.71897
203	16.04813	24.15853	0.439	0.82316
204	16.27128	24.21745	0.41445	0.76768
205	16.05763	24.16079	0.49426	0.73402
206	16.14567	24.33335	0.53518	0.76058
207	16.09098	24.18395	0.49171	0.82348
208	16.24278	24.31982	0.49554	0.81649
209	16.04581	24.27637	0.478	0.70241
210	16.34729	24.26428	0.42794	0.68532
211	16.19897	24.25957	0.4881	0.79413
212	16.25503	24.24574	0.51243	0.68994
213	16.18092	24.12523	0.49415	0.80004
214	16.32723	24.08988	0.40095	0.79219
215	16.20172	24.14378	0.44017	0.81585
216	16.31625	24.06959	0.57737	0.83026
217	16.30886	24.04161	0.47651	0.6493
218	16.3665	24.18743	0.47226	0.71048
219	16.33261	24.23651	0.42901	0.78069
220	16.38307	24.19809	0.52338	0.83047
221	16.36871	24.39094	0.45228	0.82671
222	16.41791	24.15495	0.45313	0.74714
223	16.24204	24.18651	0.42794	0.79284
224	16.27192	24.20628	0.55558	0.80434
225	16.42445	24.38858	0.43953	0.7894
226	16.4007	24.34595	0.60458	0.86649
227	16.3267	24.41696	0.56802	0.78843

228	16.42076	24.30722	0.46961	0.77047
229	16.51238	24.28754	0.49405	0.85628
230	16.46256	24.17565	0.44707	0.84327
231	16.5507	24.21704	0.54474	0.65134
232	16.48736	24.37608	0.4559	0.81391
233	16.72677	24.46287	0.45664	0.81671
234	16.41125	24.43654	0.46982	0.85542
235	16.5773	24.42383	0.54804	0.74671
236	16.55439	24.33499	0.49798	0.78639
237	16.61245	24.31429	0.49756	0.7208
238	16.60295	24.38048	0.38852	0.81983
239	16.63874	24.48623	0.63848	0.76123
240	16.7007	24.41164	0.4322	0.89445
241	16.60612	24.4019	0.53752	0.86456
242	16.65721	24.27258	0.46429	0.91584
243	16.66861	24.37034	0.46174	0.81628
244	16.74293	24.47875	0.52359	0.92864
245	16.77586	24.40026	0.60511	0.7837
246	16.7424	24.45611	0.67791	0.81305
247	16.74134	24.48736	0.53369	0.84423
248	16.68476	24.4307	0.58949	0.90434
249	16.77808	24.55161	0.49075	0.80381
250	16.84912	24.45672	0.64836	0.88144
251	16.89314	24.39831	0.58534	0.81295
252	16.73744	24.54823	0.41795	0.76155
253	16.70767	24.38458	0.55335	0.90649
254	16.89092	24.46482	0.56153	0.83864
255	16.91256	24.48162	0.66994	0.81553
256	16.75464	24.63738	0.5644	0.83725
257	16.85524	24.39924	0.60925	0.75736
258	16.84944	24.43336	0.62838	0.88531
259	16.97315	24.63185	0.54984	0.91713
260	16.90105	24.36675	0.6202	0.84606

261	16.92037	24.57344	0.65038	0.77682
262	16.93093	24.55192	0.55452	0.78736
263	16.95341	24.56913	0.57131	0.90477
264	16.95151	24.30343	0.5457	0.75424
265	17.01084	24.43777	0.63083	0.79262
266	17.05137	24.40159	0.66207	0.87187
267	17.06404	24.42834	0.49426	0.91412
268	17.05781	24.52333	0.64571	0.80542
269	16.95373	24.54147	0.55696	0.86402
270	17.01833	24.46215	0.53943	0.90735
271	17.13645	24.52128	0.59586	0.91713
272	17.15239	24.35948	0.67621	0.90305
273	17.17192	24.50642	0.60575	0.94143
274	17.06172	24.5469	0.64475	0.90961
275	17.19441	24.5925	0.64326	0.93251
276	17.08906	24.49269	0.60691	0.9395
277	17.11904	24.3812	0.61255	0.96025
278	17.15936	24.51206	0.68811	0.97993
279	17.2361	24.4805	0.67642	0.84886
280	17.11101	24.5014	0.62403	0.90606
281	17.10521	24.6591	0.75985	0.93971
282	17.03343	24.51995	0.49288	0.92326
283	17.20243	24.59373	0.72658	0.82886
284	17.20391	24.51236	0.62328	0.83585
285	17.22333	24.59342	0.57588	0.95606
286	17.14954	24.51892	0.62126	0.95133
287	17.23557	24.54413	0.53815	0.93015
288	17.26334	24.64179	0.63444	1.00466
289	17.40954	24.67755	0.62923	1.01197
290	17.29648	24.61432	0.69778	0.99283
291	17.32868	24.68708	0.62689	0.91391
292	17.29764	24.76024	0.61297	1.06638
293	17.18184	24.72069	0.69257	1.05767

294	17.48354	24.68154	0.69938	0.94681
295	17.34282	24.58655	0.65857	0.85897
296	17.33881	24.73165	0.61042	1.00498
297	17.40415	24.67273	0.61053	0.95875
298	17.36278	24.39944	0.71287	0.95186
299	17.32382	24.69753	0.74072	0.86305
300	17.48913	24.61648	0.72956	1.06283
301	17.45989	24.63912	0.68992	1.04874
302	17.4695	24.44627	0.77228	0.99509
303	17.52523	24.73257	0.44888	0.96358
304	17.36056	24.66863	0.7388	1.08229
305	17.424	24.73903	0.61435	0.89488
306	17.49948	24.77182	0.83498	1.05519
307	17.50496	24.67335	0.66335	1.09939
308	17.49948	24.67386	0.72648	1.07498
309	17.56598	24.56729	0.65867	1.02175
310	17.55627	24.7794	0.71011	0.8909
311	17.57812	24.62252	0.54325	0.9981
312	17.6935	24.64373	0.62498	1.04659
313	17.54328	24.76977	0.67334	1.00584
314	17.65169	24.6508	0.73838	0.93326
315	17.57273	24.66259	0.69927	1.06132
316	17.68896	24.84888	0.59629	1.05713
317	17.4848	24.8126	0.69619	0.97885
318	17.61	24.74825	0.79587	1.09272
319	17.69138	24.72571	0.76442	1.00692
320	17.5189	24.90811	0.67674	1.16852
321	17.60409	24.8291	0.82212	0.95832
322	17.62488	24.78996	0.71606	1.04971
323	17.75514	24.8828	0.61818	1.06165
324	17.54444	24.89079	0.84795	1.10412
325	17.86155	24.80113	0.87633	1.05014
326	17.74849	24.82039	0.72137	1.01552

327	17.71587	24.86005	0.67026	1.02283
328	17.77309	24.78863	0.63115	1.06982
329	17.96774	24.78565	0.70979	1.06455
330	17.72601	24.88372	0.68205	1.07562
331	17.61179	24.9329	0.75889	1.09508
332	17.80338	24.93465	0.70586	0.96004
333	17.78174	24.75133	0.65644	1.07164
334	17.85321	25.07493	0.74646	1.18239
335	17.85342	25.01273	0.76846	1.17551
336	17.78132	24.86558	0.61117	1.10874
337	17.95381	24.91477	0.61605	1.07455
338	17.90377	24.92204	0.80172	1.13369
339	17.8056	24.77326	0.8691	1.20487
340	17.90377	24.8581	0.79726	1.17906
341	17.77953	24.88464	0.70756	1.11197
342	17.82471	24.77951	0.73774	1.17788
343	17.929	24.87726	0.64347	1.21218
344	17.74501	24.97512	0.70331	1.17336
345	17.78808	24.92481	0.75815	1.08154
346	17.99001	24.82838	0.8098	1.18229
347	17.99846	24.91333	0.70937	1.16734
348	17.90736	24.92481	0.77834	1.05949
349	17.96901	24.98875	0.76962	1.18164
350	17.83632	24.89151	0.78323	1.08197
351	17.97112	24.94028	0.72063	1.02745
352	18.05082	24.99756	0.78312	1.19798
353	18.13125	25.06724	0.66197	1.0367
354	18.09336	24.95217	0.80608	1.16476
355	18.13062	24.94428	0.81394	1.22089
356	18.13695	24.96949	0.7659	1.24938
357	17.87633	24.91948	0.81394	1.10057
358	17.50148	24.87337	0.74019	1.02132
359	17.78618	24.97912	0.79566	1.05444

360	17.84856	24.94428	0.72467	1.16788
361	17.84698	25.04245	0.78089	1.10863
362	18.00258	24.96477	0.75464	1.17659
363	18.04058	24.81127	0.68141	1.19293
364	18.18235	25.01263	0.79067	1.10143
365	18.04733	24.98906	0.78131	1.21863
366	18.02232	25.24114	0.83881	1.15358
367	18.2309	25.16357	0.80193	1.21089
368	18.15954	24.94961	0.78535	1.20551
369	18.0866	25.00494	0.74178	1.20605
370	18.21422	25.23325	0.68832	1.32056
371	18.18963	25.12258	0.78812	1.16798
372	18.13917	25.02943	0.77345	1.06455
373	18.24853	25.24892	0.89567	1.20659
374	18.20736	25.0614	0.96985	1.15863
375	18.19459	25.11049	0.83552	1.20852
376	18.25529	25.13324	0.89195	1.19132
377	18.37795	25.00853	0.88323	1.22669
378	18.32147	25.08589	0.8775	1.30841
379	18.28527	24.99746	0.80618	1.15971
380	18.40054	24.94858	0.85805	1.19594
381	18.43453	25.0489	0.96252	1.17282
382	18.42133	25.01775	0.79726	1.29121
383	18.3543	25.11663	0.73732	1.19831
384	18.46271	25.12207	0.85698	1.25121
385	18.37753	25.12442	0.75602	1.37217
386	18.52436	25.15701	0.84019	1.1896
387	18.38238	25.06007	0.94211	1.20788
388	18.44171	25.08057	0.89864	1.21551
389	18.3447	25.09891	1.03362	1.27207
390	18.38956	25.15947	0.83424	1.17218
391	18.36845	25.06909	0.83743	1.35561
392	18.59941	25.14369	0.95433	1.27045

393	18.38829	25.16418	0.78684	1.27981
394	18.4738	25.21091	0.7794	1.26368
395	18.34565	24.99941	0.85231	1.22314
396	18.49132	25.22792	0.81809	1.20239
397	18.43537	25.09143	0.81139	1.30131
398	18.42767	25.21378	0.85943	1.21745
399	18.641	25.19923	0.78227	1.24067
400	18.46166	25.10987	0.83637	1.29873
401	18.50948	25.082	0.86655	1.26282
402	18.49586	25.02421	0.84551	1.20196
403	18.44361	25.3435	0.91129	1.30658
404	18.48171	25.16213	0.86974	1.19755
405	18.58326	25.2977	0.84062	1.26443
406	18.56215	25.28602	0.8792	1.17562
407	18.55677	25.17822	0.79513	1.28164
408	18.59361	25.13047	0.8572	1.26873
409	18.58284	25.13037	0.81585	1.22024
410	18.60258	25.22105	0.94286	1.25411
411	18.69906	25.21081	0.80098	1.28411
412	18.62675	25.17515	0.84157	1.24701
413	18.54273	25.24073	0.84721	1.35851
414	18.49839	25.35385	0.82531	1.26519
415	18.65863	25.29729	0.76293	1.32034
416	18.844	25.06601	0.89801	1.39109
417	18.71352	25.25384	0.86347	1.19712
418	18.64269	25.31563	0.65676	1.30895
419	18.68196	25.09307	0.75506	1.33303
420	18.7795	25.41001	0.86092	1.38002
421	18.54853	25.35017	0.81097	1.4069
422	18.80219	25.28274	0.70033	1.32615
423	18.7016	25.28192	0.71734	1.314
424	18.72376	25.07042	0.73849	1.38765
425	18.72904	25.19451	0.79077	1.35056

426	18.79913	25.25651	0.78472	1.35851
427	18.77644	25.34668	0.88164	1.3783
428	18.82426	25.23673	0.83169	1.3897
429	18.73791	25.17084	0.68216	1.37755
430	18.79502	25.23202	0.9521	1.3454
431	18.732	25.29596	0.90013	1.33099
432	18.76134	25.27669	0.75219	1.4812
433	18.70339	25.37363	0.84487	1.26981
434	18.78995	25.22689	0.84189	1.39927
435	18.9181	25.24267	0.87941	1.42819
436	18.84959	25.33797	0.79747	1.41572
437	18.94333	25.23991	0.92734	1.40529
438	18.7225	25.44188	0.78769	1.25529
439	18.83344	25.25989	0.92659	1.37733
440	18.89065	25.35355	0.96666	1.23121
441	18.99917	25.39904	0.85199	1.44615
442	18.8042	25.46463	1.03478	1.35024
443	18.88158	25.25128	0.89014	1.33303
444	18.93161	25.16152	1.07092	1.30744
445	18.86448	25.30272	0.78025	1.22755
446	18.93478	25.34473	0.92107	1.2439
447	18.89667	25.28079	0.90226	1.37776
448	19.02852	25.3059	1.0266	1.35174
449	18.98566	25.38449	0.92043	1.38561
450	18.93066	25.17453	0.89439	1.44346
451	19.08277	25.36215	0.91395	1.34873
452	18.91979	25.36451	0.93255	1.35529
453	18.95389	25.39966	0.84147	1.2654
454	19.05142	25.25835	0.7861	1.42324
455	18.90322	25.39279	0.91692	1.31002
456	18.93847	25.30272	0.86017	1.38808
457	19.01912	25.39454	0.86485	1.3611
458	19.089	25.48491	0.8793	1.40303

459	19.02609	25.31153	0.85018	1.36572
460	18.98851	25.39146	0.88143	1.34314
461	19.00793	25.44075	0.93446	1.32873
462	19.08636	25.37035	0.91682	1.34217
463	19.19361	25.4345	0.88749	1.37228
464	18.9846	25.47385	0.98239	1.29271
465	19.00835	25.41954	0.91522	1.34733
466	19.20449	25.35775	0.92596	1.45206
467	19.22074	25.39177	0.89216	1.42464
468	19.23837	25.46616	0.91597	1.34583
469	19.2029	26.06387	0.98154	1.43421
470	19.11307	25.52672	0.99344	1.40002
471	19.20575	25.35426	0.96677	1.42314
472	19.11508	25.27618	0.91299	1.36733
473	19.1914	25.38726	0.95571	1.41873
474	19.3244	25.35129	0.89716	1.44131
475	19.42204	25.32414	0.99971	1.48819
476	19.24101	25.55203	0.80661	1.5198
477	19.27162	25.50951	0.93287	1.36765
478	19.33464	25.56074	0.83615	1.49303
479	19.26318	25.30559	0.96921	1.43109
480	19.37718	25.49332	0.95784	1.47894
481	18.97531	25.5382	0.89886	1.5084
482	18.60891	25.58718	0.8167	1.51184
483	18.77865	25.53676	0.9741	1.38712
484	18.85814	25.35088	0.99801	1.43529
485	18.8004	25.51893	0.97569	1.37991
486	18.94544	25.43091	0.92139	1.30271
487	19.07486	25.67715	0.9555	1.24734
488	19.00445	25.47795	0.92957	1.39432
489	19.18865	25.52529	1.01215	1.36927
490	19.19857	25.41657	0.97325	1.37905
491	19.11117	25.64036	0.97081	1.44658

492	19.14885	25.49936	1.04191	1.40808
493	19.09713	25.59282	0.90375	1.31325
494	19.04456	25.57119	1.04488	1.50679
495	19.20501	25.61085	1.01417	1.40314
496	19.30804	25.51904	0.90258	1.48055
497	19.15445	25.69939	0.9978	1.477
498	19.25969	25.55306	0.93085	1.40066
499	19.46174	25.57734	1.00811	1.53636
500	19.26708	25.44884	0.92543	1.44808
501	19.20512	25.63012	1.00216	1.5284
502	19.39291	25.45438	0.97229	1.35368
503	19.3244	25.613	0.93212	1.41733
504	19.31406	25.47733	1.05328	1.6085
505	19.46174	25.4925	0.96103	1.45582
506	19.5275	25.63678	1.01077	1.49496
507	19.40642	25.5591	0.94944	1.38335
508	19.39027	25.51586	1.03393	1.42088
509	19.41054	25.46831	1.01937	1.46055
510	19.59527	25.53758	1.01969	1.52421
511	19.34657	25.5384	1.03213	1.55646
512	19.4801	25.51391	1.04371	1.55829
513	19.48749	25.46001	0.97665	1.47496
514	19.51367	25.50848	1.03478	1.52399
515	19.49646	25.56044	1.0385	1.57485
516	19.57954	25.62356	1.09759	1.56947
517	19.52613	25.63483	1.03553	1.50442
518	19.45297	25.56494	1.01119	1.3997
519	19.51631	26.55573	0.99801	1.48152
520	19.56613	25.696	0.92319	1.4641
521	19.33971	25.66137	0.93999	1.55098
522	19.54756	25.51576	1.07623	1.49432
523	19.63253	25.59405	0.96815	1.59055
524	19.43461	25.69734	0.97899	1.54517

525	19.49372	25.52426	1.0198	1.58571
526	19.55547	25.69088	1.16519	1.47959
527	19.65871	25.52139	1.09441	1.56872
528	19.47746	25.66854	1.09249	1.58711
529	19.64552	25.50151	0.97665	1.54947
530	19.45751	25.77255	1.07772	1.49088
531	19.53246	25.69949	1.07602	1.48905
532	19.59464	25.59855	1.10344	1.50475
533	19.76839	25.75687	1.00205	1.54485
534	19.54851	25.70594	1.06486	1.63012
535	19.72342	25.60604	0.98537	1.57109
536	19.71234	25.45694	0.98707	1.51475
537	19.67708	25.61362	1.03436	1.61625
538	19.54207	25.63217	1.09579	1.66173
539	19.71244	25.63196	1.21174	1.70119
540	19.76533	25.45417	1.03989	1.56087
541	19.63464	25.32885	1.1282	1.67538
542	19.69196	25.60347	1.02501	1.61872
543	19.56138	25.70615	1.03138	1.63194
544	19.64319	25.60214	1.06029	1.70743
545	19.8579	25.6501	1.03585	1.67904
546	19.6945	25.60644	1.08856	1.68667
547	19.67708	25.54343	1.00396	1.68485
548	19.67571	25.61895	1.08622	1.76022
549	19.78486	25.47672	1.07549	1.69388
550	19.72859	25.68207	1.21375	1.57517
551	19.78887	25.62141	1.05732	1.65119
552	19.70094	25.52273	1.05498	1.67055
553	19.73165	25.54179	1.0639	1.57184
554	19.94182	25.64497	1.09101	1.66119
555	19.65248	25.60983	1.01023	1.69979
556	19.79995	25.63544	1.17124	1.63388
557	19.79837	25.7001	1.01385	1.64775

558	19.71909	25.79653	1.03776	1.69571
559	19.76121	25.47395	1.02756	1.64689
560	19.79003	25.65071	1.06157	1.62291
561	19.72711	25.75042	1.00343	1.67033
562	19.76786	25.71722	1.09387	1.7442
563	19.88472	25.67367	1.1163	1.60399
564	19.8863	25.66864	0.98909	1.56679
565	19.8389	25.63801	1.04169	1.66936
566	20.00516	25.86887	0.95433	1.70065
567	19.81557	25.80544	1.17603	1.63431
568	19.85125	25.78895	0.98983	1.58614
569	19.85706	25.64169	1.15466	1.56227
570	19.96104	25.84797	0.99536	1.70087
571	19.7706	25.82963	1.11343	1.58851
572	19.7421	25.77665	1.0384	1.69216
573	19.87184	25.88219	1.14754	1.64463
574	19.95396	25.72224	0.86836	1.56162
575	19.8921	25.71045	0.93892	1.74474
576	19.89052	25.68586	0.93754	1.70947
577	19.9148	25.725	0.9504	1.71226
578	19.93665	25.87728	1.09334	1.63635
579	19.92472	25.68484	1.08782	1.67442
580	20.09731	25.67766	0.95401	1.62689
581	20.10375	25.72685	1.0266	1.70076
582	19.94341	25.69877	1.01948	1.59808
583	20.03904	25.85565	1.10057	1.66087
584	20.02511	25.84254	1.01991	1.66581
585	20.04527	25.85258	1.0334	1.61474
586	20.1825	25.783	1.04127	1.68334
587	19.99534	25.77183	1.09632	1.67882
588	19.99967	25.75667	1.04828	1.64259
589	20.0401	25.8035	1.01066	1.62098
590	20.05995	25.77747	1.00322	1.65549

591	20.12782	25.82747	1.03978	1.61829
592	19.99154	25.74929	1.06242	1.64452
593	20.13679	25.77388	1.06497	1.58334
594	20.02691	25.8657	1.12491	1.68076
595	20.0002	25.71998	1.19728	1.55937
596	19.96484	25.81969	1.06986	1.5827
597	20.23613	25.77019	1.08792	1.63775
598	20.15263	25.90453	1.0265	1.80344
599	20.15843	25.73125	1.06231	1.63571
600	20.27666	25.63503	1.07443	1.64926
601	20.1445	25.84397	1.06826	1.76549
602	20.03894	25.8743	1.1027	1.7414
603	20.09573	25.895	1.11609	1.74785
604	19.91786	25.8077	1.03553	1.64764
605	19.99566	25.81692	1.13787	1.68517
606	20.023	25.67377	1.06624	1.70441
607	20.03809	25.86775	1.08835	1.70441
608	20.11178	25.86303	1.13851	1.65001
609	19.96853	25.87953	1.25542	1.87269
610	20.01772	25.80483	1.14903	1.69474
611	20.07831	25.79807	1.13734	1.72474
612	20.10534	25.89265	1.10153	1.66786
613	20.07494	25.88875	1.09961	1.82559
614	19.99576	26.02012	1.07825	1.69237
615	20.06765	25.91078	1.13575	1.71721
616	19.88377	25.7455	1.16083	1.69667
617	19.87944	25.86057	1.2924	1.69495
618	20.04907	25.83536	1.30452	1.81936
619	20.03282	25.66936	1.18782	1.63173
620	20.16909	26.01858	1.11896	1.74957
621	20.17849	25.64877	1.1028	1.87441
622	20.0287	26.07289	1.05955	1.75345
623	20.04876	25.74775	1.2146	1.7171

624	20.14197	25.92226	1.00471	1.7542
625	20.13046	25.79448	1.22141	1.73742
626	20.12624	25.81221	1.11385	1.76323
627	20.17152	25.8452	1.13394	1.73269
628	20.20889	25.95034	1.21078	1.75388
629	20.30221	25.85299	1.18644	1.82011
630	20.12085	25.80975	1.02713	1.80495
631	19.99893	25.92001	1.08803	1.79699
632	20.2509	25.85258	1.13883	1.89925
633	20.06533	25.84049	1.26636	1.73527
634	19.98975	25.84643	1.20461	1.84591
635	20.1825	26.07576	1.25042	1.90591
636	20.31044	25.84387	1.0791	1.77108
637	20.26589	25.88137		1.88882
638	20.10175	25.92308		1.7442
639	20.27117	25.83352		1.8042
640	20.08686	25.73218		1.79097
641	20.21681	25.78884		1.86452
642	20.36565	25.83198		1.72108
643	20.14777	25.85371		1.78226
644	20.17986	25.82778		1.76646
645	20.28331	25.97011		1.75635
646	20.3344	25.93117		1.80516
647	20.30295	25.93281		1.8329
648	20.19823	25.9158		1.70495
649	20.13415	25.94173		1.82602
650	20.17004	25.94019		1.77882
651	20.30537	26.00475		1.81484
652	20.22209	25.90259		1.88613
653	20.3591	25.89131		1.62711
654	20.34538	25.81671		1.71538
655	20.24288	25.72859		1.62506
656	20.34686	26.03897		1.71958

657	20.32321	26.12597		1.75764
658	20.3343	26.18192		1.78495
659	20.27455	26.11357		1.6971
660	20.22071	26.09431		1.87527
661	20.29123	26.18797		1.77516
662	20.09404	26.181		1.82441
663	20.22557	26.08734		1.87645
664	20.33514	26.1024		1.72646
665	20.37367	26.06695		1.8057
666	20.38782	26.16911		1.79409
667	20.19179	26.01274		1.92527
668	20.30907	26.01633		1.90892
669	20.41885	26.17649		1.83914
670	20.58521	26.02545		1.76172
671	20.49707	26.05352		1.8815
672	20.24879	26.24043		2.00591
673	20.3818	25.97391		1.88892
674	20.192	26.17967		1.93516
675	20.2584	26.10035		1.93946
676	20.27096	26.03313		1.83495
677	20.32448	26.05086		1.95322
678	20.55502	26.05434		1.8057
679	20.50636	25.90586		1.94903
680	20.58965	25.93814		1.88301
681	20.28975	26.18407		1.85742
682	20.29957	26.12679		1.92806
683	20.44271	26.22588		1.80592
684	20.38919	25.97524		1.91656
685	20.3952	25.90545		1.86505
686	20.3951	25.94573		1.99096
687	20.45727	26.01715		1.82688
688	20.40555	25.95987		1.90968
689	20.47839	25.99788		1.91892

690	20.52821	26.10456		1.99774
691	20.56896	26.04799		2.0087
692	20.47005	25.84295		1.96935
693	20.53887	25.97329		1.91688
694	20.54763	26.036		1.97376
695	20.2945	26.03846		1.93247
696	20.54362	26.06357		2.0673
697	20.54837	26.10456		1.99107
698	20.43796	25.99286		1.95828
699	20.53159	26.06705		2.02343
700	20.48039	26.07094		1.90602

Table Apx. 2. 12: Time course of percent vesicle fusion of all constructs at pH 7.45 in lipid:protein 600:1.

Time (s)	FPHM	G10V	V2E	L9R
0	0.46155	0.96858	0.13322	0.26079
2	0.56377	1.6763	0.1218	0.43823
3	0.51255	2.45562	0.1012	0.12936
4	0.59869	3.12481	0.12542	0.17098
5	0.68426	3.83799	0.09577	0.28028
6	0.52804	4.25311	0.16049	0.33204
7	0.70437	4.64876	0.02506	0.08347
8	0.62043	5.17755	0.18832	0.17974
9	0.58979	5.46404	0.07179	0.38243
10	0.66529	6.0245	0.16694	0.20707
11	0.75525	6.65816	0.05878	0.24592
12	0.68564	6.74453	0.15347	0.34092
13	0.76913	6.7899	0.11071	0.28408
14	0.78659	6.79943	0.12576	0.11368
15	0.8614	6.95525	0.11286	0.28328
16	0.91644	6.99003	0.07088	0.57381
17	1.01102	7.09191	0.18662	0.1787

18	0.99865	7.386	0.0762	0.47213
19	0.8459	7.19476	0.15393	0.38566
20	0.90673	7.22269	0.06093	0.18285
21	1.02779	7.36877	0.22294	0.64633
22	0.91759	7.3586	0.12813	0.56494
23	1.11301	7.46616	0.04395	0.64368
24	1.11104	7.64231	0.1752	0.16821
25	1.10121	7.72932	0.09136	0.7765
26	1.01021	7.62658	0.19986	0.34807
27	1.25188	7.53326	0.21717	0.93756
28	1.25049	7.59651	0.1296	0.13362
29	1.16874	7.761	0.13843	0.00934
30	1.3527	7.7442	0.04429	0.31371
31	1.16689	7.96177	0.19183	0.52677
32	1.21094	7.90344	0.03513	0.25895
33	1.33004	8.04963	0.15698	0.17951
34	1.20227	7.99066	0.22758	0.36075
35	1.25176	8.11416	0.16309	0.15922
36	1.18874	8.10421	0.19511	0.17882
37	1.35502	8.22182	0.09973	0.45426
38	1.44752	8.2642	0.1976	0.27267
39	1.30379	8.29834	0.09905	0.67297
40	1.48568	8.23392	0.13888	0.17144
41	1.31351	8.53603	0.24546	0.62835
42	1.44047	8.42998	0.19353	0.19508
43	1.53829	9.10067	0.1227	0.22148
44	1.57448	8.46165	-0.00515	0.28028
45	1.71959	8.84093	0.21389	0.4222
46	1.46024	8.8801	0.23426	0.13697
47	1.656	8.78282	0.1735	0.06768
48	1.58304	8.93243	0.1752	0.13132
49	1.66074	9.26612	0.10505	0.33677
50	1.77371	9.36864	0.12881	0.15726

51	1.69867	9.42975	0.08729	0.11529
52	1.73659	9.51269	0.11523	0.4305
53	1.73948	9.43189	0.23742	0.09466
54	1.69936	9.49503	0.29682	0.17294
55	1.88136	9.50756	0.02438	0.94886
56	1.69323	9.51515	0.21084	0.0641
57	1.91E+00	9.50049	0.22407	0.53577
58	1.80E+00	9.56973	0.1838	0.435
59	1.78E+00	9.53827	0.17667	0.22009
60	1.87442	9.62324	0.11308	0.20511
61	1.89431	9.65267	0.14092	0.2126
62	1.73613	9.57508	0.2441	0.69845
63	1.94322	9.61083	0.14985	0.14135
64	1.94588	9.60708	0.23369	0.15472
65	2.10614	9.45233	0.16965	0.392
66	1.9645	9.52275	0.21106	0.20868
67	1.98889	9.63555	0.19556	0.52343
68	1.98716	9.89657	0.29252	0.25169
69	2.03399	10.62	0.0108	0.1749
70	2.07931	10.75647	0.04644	0.67331
71	1.97398	10.85611	0.16049	0.31325
72	1.91628	10.96998	0.14804	0.72796
73	2.01699	10.92942	0.01658	0.30714
74	2.12349	10.88222	0.17712	0.0837
75	2.24455	11.10108	0.21672	0.3038
76	2.29172	10.97822	0.18244	0.22448
77	2.19737	11.06683	0.15495	0.22528
78	2.19598	10.98218	0.25315	0.18032
79	2.19841	11.04403	0.04101	0.14366
80	2.20281	10.98592	0.19443	0.58938
81	2.25461	10.91561	0.09815	0.24408
82	2.20512	11.10118	0.12032	0.61348
83	2.36099	10.96045	0.11897	0.35164

84	2.23911	11.03098	0.14793	0.58085
85	2.38099	10.97982	0.26005	0.11956
86	2.38874	11.12034	0.13039	0.06272
87	2.34283	11.07025	0.35475	0.21421
88	2.40782	11.01535	0.21966	0.47166
89	2.40296	10.98496	0.39967	0.16187
90	2.55316	11.05581	0.23539	0.82031
91	2.37128	11.14795	0.23607	0.20338
92	2.52425	11.1075	0.30938	0.33435
93	2.49604	10.98913	0.16909	0.31556
94	2.49928	11.19825	0.4525	0.35176
95	2.4314	11.10643	0.20156	0.39995
96	2.55871	11.14378	0.17712	0.26148
97	2.51466	11.13329	0.19183	0.41851
98	2.6363	11.05752	0.17418	0.1402
99	2.48737	11.06629	0.27408	0.46844
100	2.69457	11.09091	0.17757	0.24465
101	2.65688	11.24823	0.35532	0.33435
102	2.67781	11.1716	0.36493	0.19784
103	2.78662	11.12184	0.19613	0.27832
104	2.79032	11.0953	0.40125	0.66213
105	2.7421	11.13885	0.24659	0.4998
106	2.69272	11.18776	0.19488	0.36894
107	2.68024	11.26888	0.33993	0.34473
108	2.72984	11.08438	0.30983	0.78745
109	2.85611	11.32838	0.29852	0.24096
110	2.92225	11.0222	0.36776	0.79379
111	2.87565	11.1807	0.26752	0.2254
112	2.7806	11.33577	0.39175	0.46417
113	2.9907	11.21569	0.33789	0.33919
114	2.8701	11.23068	0.18244	0.49991
115	3.00053	11.17706	0.40804	0.26529
116	2.95208	11.26289	0.25756	0.25837

117	3.02863	11.21783	0.30384	0.34104
118	3.03256	11.42567	0.24376	0.27417
119	3.10459	11.26706	0.26605	0.67769
120	3.08031	11.2478	0.20009	0.22989
121	3.09E+00	11.33513	0.30271	0.29492
122	3.07E+00	11.28611	0.36527	0.29942
123	3.16E+00	11.31062	0.32058	0.3762
124	3.32E+00	11.34936	0.2725	0.39695
125	3.25E+00	11.15137	0.32002	0.71355
126	3.31E+00	11.37387	0.2234	0.31383
127	3.20E+00	11.35268	0.17361	0.34784
128	3.38E+00	11.48474	0.25564	0.3528
129	3.38E+00	11.4399	0.27171	0.38231
130	3.51E+00	11.3362	0.2846	1.01458
131	3.87E+00	11.19943	0.28936	0.32501
132	3.71E+00	11.24758	0.27442	0.44572
133	3.62E+00	11.47104	0.3974	0.53669
134	3.57E+00	11.43251	0.26922	0.97181
135	3.79E+00	11.42138	0.32975	0.57428
136	3.73E+00	11.37911	0.37444	0.53542
137	3.82E+00	11.4262	0.43666	0.55248
138	3.79E+00	11.50968	0.42829	0.44146
139	3.88E+00	11.38617	0.29773	0.88326
140	3.99239	11.3682	0.33348	1.11246
141	4.08119	11.6061	0.3569	0.628
142	4.00569	11.42791	0.21808	0.57981
143	4.13253	11.61627	0.33778	0.60368
144	4.09507	11.44322	0.31142	0.66109
145	4.16121	11.43166	0.34197	0.58961
146	4.21891	11.58437	0.28121	1.03983
147	4.20746	11.54521	0.40996	0.61532
148	4.21521	11.53418	0.44402	0.82469
149	4.17913	11.45756	0.31481	0.49115

150	4.31072	11.61381	0.35543	0.7848
151	4.23024	11.49223	0.4223	0.54119
152	4.22677	11.51289	0.37251	0.68496
153	4.24053	11.51995	0.37693	0.64149
154	4.41709	11.50293	0.43519	0.63019
155	4.32795	11.45028	0.27487	0.60644
156	4.42241	11.49063	0.31131	0.62685
157	4.35454	11.52348	0.37093	0.86758
158	4.38692	11.536	0.42535	0.70882
159	4.47306	11.4079	0.36414	0.51582
160	4.20249	11.45306	0.52899	0.66847
161	4.52949	11.51877	0.4387	0.78353
162	4.36957	11.50786	0.38066	0.74929
163	4.5333	11.4659	0.41947	0.7124
164	4.51249	11.46034	0.33891	0.69695
165	4.517	11.48752	0.46868	0.62581
166	4.58684	11.4476	0.35113	0.75229
167	4.62569	11.56875	0.33031	1.6827
168	4.67263	11.6275	0.40974	1.03487
169	4.5318	11.54949	0.37885	0.8783
170	4.60834	11.61241	0.49855	0.71551
171	4.67275	11.53932	0.42886	0.76993
172	4.72455	11.66956	0.3913	0.70386
173	4.7678	12.33768	0.32488	0.88245
174	4.68188	11.89923	0.46246	0.81362
175	4.85452	12.2388	0.42388	1.27042
176	4.6724	12.92715	0.3741	0.92073
177	4.7915	12.41634	0.38394	0.66351
178	4.70698	12.23313	0.3629	0.65648
179	4.90077	12.08287	0.37319	0.63999
180	4.95824	11.63489	0.47943	0.98587
181	4.90597	12.20798	0.32149	1.06589
182	4.99709	12.24886	0.45126	0.67631

183	4.90944	11.78172	0.39944	0.72254
184	4.80457	11.80237	0.48056	0.7094
185	5.03143	11.71868	0.39571	0.84983
186	4.96529	12.07506	0.41698	0.7019
187	5.07999	11.87183	0.45646	0.8496
188	4.78225	11.71312	0.34943	0.60817
189	4.87718	12.53385	0.43169	0.66467
190	4.81428	11.63221	0.47264	0.79575
191	4.83498	11.80526	0.55965	0.82861
192	4.89915	11.73848	0.43678	0.68438
193	4.98263	11.69032	0.49674	1.03372
194	4.79508	11.76117	0.44979	0.63584
195	4.79693	11.80023	0.30056	0.65902
196	4.88204	11.76427	0.55116	0.61094
197	5.00449	11.68101	0.47468	0.54753
198	4.83394	11.77658	0.4886	0.52355
199	4.82445	11.72628	0.50421	0.65636
200	4.71588	11.66592	0.47932	0.99671
201	5.01085	11.75593	0.52899	0.57289
202	4.76167	11.57817	0.44017	0.61036
203	4.7826	11.80965	0.44357	0.58661
204	4.92586	11.73559	0.53962	1.07084
205	4.97743	11.7631	0.44142	0.63872
206	5.04947	11.7311	0.54528	1.1904
207	4.83475	11.70317	0.55207	0.55179
208	4.9476	11.84433	0.51054	0.63999
209	4.78144	11.69535	0.49425	0.58361
210	4.98483	11.84486	0.47841	0.5006
211	4.80561	11.81479	0.46778	0.53196
212	4.84504	11.7341	0.48916	0.67643
213	5.01339	11.94771	0.42988	0.73753
214	5.0312	11.80655	0.32771	0.56482
215	4.95777	11.79948	0.41958	0.60125

216	5.0164	11.73142	0.44934	0.66582
217	5.01501	11.8241	0.50907	0.45368
218	5.0845	11.97585	0.49459	0.59215
219	5.04438	11.99469	0.30746	0.70421
220	5.01177	11.89281	0.226	0.53542
221	5.15585	11.76299	0.24003	0.56309
222	5.17516	11.7403	0.25621	0.82354
223	5.22476	11.71034	0.29094	0.5579
224	5.26847	11.93914	0.21763	0.83864
225	5.08855	11.90875	0.35124	0.66247
226	4.95338	11.95017	0.32907	0.66155
227	5.27945	11.87215	0.35996	0.62535
228	5.90107	11.89783	0.27555	0.90839
229	5.18232	11.93947	0.3328	0.54384
230	5.21308	11.85909	0.32239	0.52701
231	5.25691	11.98934	0.42015	0.67839
232	5.55361	11.88906	0.41234	0.54741
233	5.72485	11.9811	0.38553	0.97031
234	5.47313	11.9415	0.41732	0.57255
235	5.51048	11.96686	0.38507	0.42751
236	5.5491	11.75689	0.21853	0.60494
237	5.35773	11.81286	0.47943	0.93987
238	5.38595	11.91111	0.44255	1.2341
239	5.43231	11.87215	0.41732	0.6197
240	5.19389	12.00164	0.51801	0.60333
241	5.26373	11.93454	0.49335	0.57612
242	5.15504	11.90939	0.4585	0.96143
243	5.22465	11.98955	0.40419	0.50233
244	5.25355	12.16859	0.55048	0.56205
245	5.31356	12.05141	0.41268	0.8971
246	5.26893	11.92277	0.43451	0.58696
247	5.30616	12.10631	0.52525	0.51582
248	5.16301	12.02059	0.30678	1.09482

249	5.37207	12.00806	0.48056	1.01666
250	5.2169	12.08961	0.48871	0.74168
251	5.48585	12.03964	0.51168	0.64345
252	5.30512	12.15511	0.40272	0.49841
253	5.2672	12.00946	0.56089	0.95255
254	5.41358	12.06093	0.51586	0.47178
255	5.41636	11.97072	0.39661	0.56494
256	5.13041	11.96023	0.46201	0.60425
257	5.22048	12.03033	0.45737	0.75506
258	5.19944	12.04713	0.59778	0.53093
259	5.37542	12.036	0.51632	0.49023
260	5.16533	12.04434	0.51598	0.59215
261	5.36525	12.00999	0.58137	0.6378
262	5.37288	11.92716	0.50885	0.5443
263	5.25691	12.07709	0.47649	0.57105
264	5.30755	12.05205	0.56112	0.55583
265	5.38213	12.04884	0.42003	0.59076
266	5.49094	11.99544	0.49618	0.52205
267	5.46261	12.11252	0.54901	0.481
268	5.61975	12.11776	0.43157	0.55606
269	5.35519	12.10834	0.63534	0.50049
270	5.54459	12.07913	0.47728	0.63019
271	5.65108	12.11562	0.56983	0.56171
272	5.56459	12.07859	0.52831	1.21542
273	5.62981	12.07945	0.53815	0.56563
274	5.63235	12.0849	0.5334	0.60425
275	5.59327	12.1732	0.56553	0.62062
276	5.65559	12.06575	0.43055	0.40526
277	5.63015	12.22553	0.62221	0.49138
278	5.48504	12.16485	0.59902	0.18562
279	5.65814	12.21558	0.55908	0.25122
280	5.65189	12.18572	0.57979	0.16498
281	5.63501	12.15211	0.50975	0.28005

282	5.61443	12.36733	0.45137	0.23647
283	5.67328	12.29456	0.46631	0.39327
284	5.73526	12.64119	0.68784	0.73661
285	5.75469	12.31971	0.53193	0.3626
286	5.71086	12.31617	0.51699	1.5372
287	5.65802	12.37953	0.5739	0.64945
288	5.6416	12.29777	0.63636	0.54903
289	5.68739	12.28428	0.66272	0.95209
290	5.75943	12.32741	0.56915	0.53588
291	5.85366	12.34678	0.60253	0.54718
292	5.74891	12.68132	0.53781	0.50637
293	5.78174	12.32484	0.53838	0.55214
294	5.75503	12.1794	0.64416	0.46198
295	5.86719	12.18657	0.59382	0.44999
296	5.74948	12.24693	0.63817	0.58823
297	5.868	12.21558	0.63387	0.57404
298	5.81192	12.34764	0.604	0.36986
299	6.01323	12.2709	0.57605	0.64011
300	5.9597	12.30633	0.63681	0.75448
301	5.91321	12.36433	0.70662	0.4516
302	6.08018	12.31767	0.68636	0.60564
303	5.89691	12.19524	0.56621	0.67343
304	6.00826	12.25945	0.67007	0.55145
305	5.99693	12.27786	0.74689	0.6544
306	5.96571	12.1458	0.63817	0.59226
307	5.9612	12.34261	0.70096	1.17023
308	5.95738	12.28064	0.80052	0.72681
309	6.07671	12.21611	0.64846	0.70375
310	6.02665	12.37664	0.61509	0.59295
311	6.09602	12.22521	0.69768	0.60817
312	6.06735	12.347	0.65073	0.61428
313	6.24276	12.41067	0.54935	0.45183
314	6.08296	12.33009	0.60649	0.54384

315	6.03751	12.38188	0.56316	0.85259
316	6.06145	12.32859	0.63545	0.89168
317	6.08804	12.45883	0.68636	0.97538
318	6.03069	12.33019	0.64213	0.61348
319	6.16066	12.49254	0.65491	0.44134
320	6.26727	12.47221	0.62889	0.78826
321	6.37943	12.40093	0.64744	0.8534
322	6.138	12.39847	0.50059	0.54003
323	6.23142	12.42833	0.76975	0.50556
324	6.18367	12.41934	0.58725	0.54245
325	6.33375	12.53449	0.57888	0.72727
326	6.32277	12.42929	0.64371	0.65821
327	6.26079	12.32827	0.63477	0.52585
328	6.39631	12.402	0.62821	0.76439
329	6.19951	12.52871	0.65853	0.97227
330	6.19315	12.42362	0.61893	0.8481
331	6.22726	12.40479	0.70153	0.64161
332	6.24206	12.38606	0.6436	0.87611
333	6.37249	12.35834	0.63975	0.5933
334	6.36047	12.36316	0.74848	0.70974
335	6.29791	12.44834	0.64609	0.55617
336	6.31988	12.46097	0.62391	0.6921
337	6.41597	12.45583	0.71567	0.57451
338	6.38012	12.41249	0.65831	0.74675
339	6.42499	12.376	0.68625	0.50821
340	6.31468	12.48569	0.56813	0.62835
341	6.36093	12.59956	0.71884	0.65659
342	6.42649	12.41485	0.77495	0.58396
343	6.56027	12.27433	0.64167	0.60956
344	6.42591	12.48987	0.7194	0.94102
345	6.49066	12.46365	0.5911	0.58246
346	6.51599	12.53813	0.57334	1.00167
347	6.53564	12.39205	0.62912	0.70859

348	6.58536	12.60759	0.59314	0.67631
349	6.67162	12.58533	0.72676	0.93445
350	6.65509	12.38424	0.75685	0.77489
351	6.49008	12.58779	0.76941	0.8202
352	6.52639	12.58083	0.69598	0.68115
353	6.59947	12.67159	0.73106	0.67527
354	6.54154	12.55515	0.73818	0.65406
355	6.42938	12.54327	0.71284	0.80348
356	6.48338	12.59785	0.79532	0.70686
357	6.70828	12.57752	0.73162	0.7795
358	6.47378	12.58736	0.66951	1.4158
359	6.61138	12.47906	0.65536	0.68011
360	6.49066	12.55718	0.71408	0.96201
361	6.633	12.41388	0.78819	0.83507
362	6.74851	12.62942	0.84386	0.65198
363	6.78702	12.5117	0.67222	1.0826
364	6.70966	12.44556	0.66	1.10693
365	6.56328	12.53246	0.79407	0.67227
366	6.67417	12.65928	0.68252	0.67078
367	6.69498	12.44171	0.84465	0.73857
368	6.82356	12.7404	0.71046	0.66478
369	6.73256	12.62214	0.68342	0.62212
370	6.7358	12.7541	0.85992	0.70825
371	6.71359	12.65286	0.69609	0.74687
372	6.66653	12.6017	0.72427	0.74376
373	6.71336	12.51994	0.64077	0.77177
374	6.72261	12.652	0.68263	0.80002
375	6.58108	12.60951	0.68093	0.60195
376	6.56536	12.5651	0.77405	0.73949
377	6.55484	12.72445	0.66815	1.11673
378	6.74643	12.54327	0.72879	0.84441
379	6.92427	12.7084	0.77246	0.68334
380	6.71394	12.6733	0.70073	0.78791

381	6.78829	12.61829	0.74656	0.69683
382	6.91583	12.72167	0.66724	0.7441
383	7.02082	12.77432	0.71499	0.78953
384	6.84056	12.62246	0.64733	0.89156
385	6.88912	12.63798	0.74961	0.65636
386	6.95896	12.63745	0.66702	0.81385
387	6.94728	12.62739	0.88187	1.07788
388	6.95075	12.6138	0.81105	0.77881
389	7.00035	12.62942	0.92566	0.76405
390	6.9896	12.54584	0.76783	0.70698
391	7.07725	12.66088	0.79622	0.70582
392	7.00533	12.76052	0.72053	0.77661
393	6.93526	12.75378	0.70718	0.78042
394	6.96867	12.65671	0.6763	1.03948
395	6.99376	12.75645	0.78887	0.78157
396	7.04684	12.69631	0.7065	0.91116
397	6.95931	12.63124	0.77326	0.83126
398	7.00533	12.81745	0.94862	1.22003
399	7.1065	12.66046	0.66057	0.99659
400	7.10985	12.68956	0.85121	0.91923
401	7.13899	12.62514	0.88481	0.90759
402	6.98393	12.55301	0.69994	0.98979
403	7.11332	12.7358	0.72381	0.70225
404	7.12107	12.77026	0.60072	0.83507
405	7.01007	12.69877	0.75131	0.99625
406	7.18998	12.96332	0.70481	0.68
407	7.06881	12.65564	0.81297	1.02519
408	7.08835	12.71439	0.84816	0.67712
409	6.94832	12.85609	0.89579	0.93537
410	7.05343	12.70209	0.7013	0.76313
411	7.03446	12.84196	0.80946	0.80313
412	7.05713	12.77165	0.69349	0.81593
413	7.19854	12.74147	0.81648	1.0042

414	7.06892	12.73269	0.67516	1.18533
415	7.30897	12.7404	0.70345	1.32138
416	7.0843	12.79605	0.85098	0.81374
417	7.22976	12.90799	0.76398	0.75817
418	7.22745	12.78224	0.77925	0.87265
419	7.31035	12.81585	0.80177	0.86896
420	7.44044	12.89954	0.80267	0.78561
421	7.15541	12.86508	0.81297	0.98864
422	7.41419	12.77283	0.87361	0.73822
423	7.29671	12.85566	0.86264	1.25035
424	7.27139	12.88391	0.82632	0.85778
425	7.26167	12.75206	0.83695	0.97527
426	7.2826	12.77379	0.6608	1.18141
427	7.34886	12.91495	0.74995	0.79287
428	7.4498	12.93089	0.6884	0.77016
429	7.3884	13.49371	0.6514	0.81939
430	7.33487	13.09314	0.89171	0.90021
431	7.38678	13.00591	0.86139	1.19398
432	7.37707	12.76137	0.78038	0.91704
433	7.37649	12.75934	0.82157	0.79679
434	7.37811	13.02625	0.86705	0.85663
435	7.3307	12.91901	0.89986	1.06577
436	7.29151	13.03374	0.86626	0.96593
437	7.5452	12.7694	0.77326	0.89295
438	7.27497	12.82912	0.80064	1.11396
439	7.35464	12.86615	0.8399	0.73638
440	7.52808	12.88327	0.67132	1.16734
441	7.42078	12.84603	0.76884	0.83357
442	7.44136	12.81221	0.77654	0.85386
443	7.36435	12.98055	0.74214	0.91727
444	7.52334	12.84068	0.78627	0.78273
445	7.45084	12.79348	0.73671	0.84222
446	7.52716	13.04551	0.73683	0.94552

447	7.40748	13.2451	0.77088	1.03337
448	7.42633	12.99361	0.90212	1.49558
449	7.46241	12.90211	0.88889	0.86931
450	7.38043	12.84517	0.66	0.97342
451	7.49652	13.207	0.73366	1.29117
452	7.58289	12.91784	0.89137	0.84798
453	7.60636	12.8014	0.95767	1.3819
454	7.59388	12.92586	0.74056	1.19767
455	7.62718	13.03203	0.88945	0.9137
456	7.61596	12.88862	0.80765	0.74998
457	8.14022	12.96824	0.85958	0.94806
458	7.93267	12.94363	0.78468	0.9657
459	7.7228	13.02914	0.97962	0.79022
460	7.72188	12.85373	0.86547	0.81697
461	7.58833	12.97349	0.98539	0.83541
462	7.50403	12.91613	0.86626	0.89283
463	7.72905	13.01683	0.94681	0.9642
464	7.62891	12.78203	0.74757	1.0826
465	7.68094	12.92993	0.88979	0.88234
466	7.53456	13.02678	0.84431	1.08157
467	7.80444	12.97488	0.84657	0.91347
468	7.6325	12.8669	0.8313	1.04479
469	7.76662	12.93678	0.81455	0.96316
470	7.71031	13.01683	0.96175	0.9258
471	7.77518	12.92169	0.85076	0.91105
472	7.6695	13.03181	0.86943	1.03061
473	7.86641	13.0484	0.86151	0.90609
474	7.69609	12.70465	0.85675	1.31895
475	7.75495	12.79423	0.70877	1.17564
476	7.78859	12.80097	0.89997	1.45166
477	7.78721	12.92854	0.85506	0.97158
478	7.87162	12.71985	0.93776	1.3849
479	7.89624	12.90478	0.86897	1.17242

480	7.75367	12.8456	1.03914	1.17207
481	7.75749	12.93432	0.94874	1.20919
482	7.96215	12.88776	0.9889	0.92546
483	7.98065	12.83072	0.94715	1.24332
484	7.78536	12.86636	0.94851	0.86943
485	7.88503	12.72627	0.89963	0.93964
486	7.81415	12.85716	0.85777	0.91693
487	7.92665	12.93903	0.89579	1.05286
488	7.80652	13.06381	0.78197	0.94195
489	7.85173	12.93582	0.94025	1.27699
490	7.87058	12.95422	0.8313	1.28148
491	8.12369	12.97274	0.88741	1.42237
492	7.91382	12.96289	0.97227	0.89018
493	8.00216	12.91645	1.02488	1.0087
494	7.99569	13.02154	0.86818	1.06312
495	7.964	13.09881	0.84997	1.14048
496	7.95637	13.0804	0.8907	1.02749
497	8.05003	13.20968	1.0027	0.91819
498	7.91845	13.20411	0.93312	1.01112
499	7.93949	13.16409	1.01843	1.00985
500	7.85832	13.13327	0.8339	1.2658
501	7.90677	13.17725	0.95847	1.10485
502	8.01291	13.22006	0.97917	0.98806
503	7.98736	13.16259	0.92419	0.89191
504	8.02771	13.14215	0.99761	0.94114
505	7.93105	13.25538	0.88278	0.88476
506	8.05419	13.25334	0.87214	0.74376
507	8.17098	13.27089	0.89828	0.95889
508	8.14878	13.21011	1.0655	0.96708
509	8.05142	13.32216	0.91683	0.90424
510	7.96909	13.39718	1.04038	1.36795
511	8.13745	13.10769	0.94602	1.0728
512	8.04298	13.29508	0.9932	0.91658

513	7.94886	13.26726	0.95326	1.12284
514	8.09235	13.41056	1.01017	1.08987
515	8.06078	13.38744	0.91717	0.89629
516	8.01141	13.23536	0.97646	1.25889
517	8.05639	13.23119	0.93957	1.04905
518	8.21457	13.37941	0.97713	1.04974
519	8.09859	13.49799	0.93233	1.0803
520	8.02031	13.24007	0.91638	1.25128
521	8.14727	13.46342	0.92792	0.94102
522	8.16531	13.3685	0.90631	1.51956
523	8.24521	13.43699	0.951	1.05309
524	8.15074	13.42532	0.95609	1.1896
525	8.41576	13.4631	1.03201	1.29036
526	8.21735	13.45422	1.13191	0.99556
527	8.24787	13.44287	0.94138	0.93364
528	8.13895	13.59195	0.93278	0.93918
529	8.06356	13.53898	0.98279	0.88268
530	8.24452	13.44865	0.9751	0.98737
531	8.28233	13.5409	1.00859	1.12019
532	8.0846	13.59238	0.99026	1.12284
533	8.35622	13.62491	0.9648	0.94621
534	8.18763	13.59003	1.05803	0.97607
535	8.27192	13.33746	0.93086	1.04386
536	8.12149	13.3548	1.02624	1.24517
537	8.21885	13.71278	0.94297	1.02346
538	8.36292	13.41227	1.08088	1.02634
539	8.26591	13.43699	1.00961	1.08376
540	8.40617	13.64878	0.93414	0.95716
541	8.28984	13.5042	1.08858	1.14279
542	8.29909	13.52924	1.13067	1.29935
543	8.37633	13.53962	1.03303	1.0321
544	8.26209	13.65456	1.10668	1.18406
545	8.44791	13.73172	0.90133	1.3276

546	8.39437	13.66762	0.92928	1.09252
547	8.30719	13.68859	0.9992	0.97215
548	8.29401	13.67661	0.9708	1.12342
549	8.49219	13.65691	1.02273	1.04202
550	8.21642	13.67982	1.13734	1.29474
551	8.32523	13.62663	1.0242	1.16642
552	8.35564	13.5347	1.02047	1.09932
553	8.50514	13.72915	1.09605	1.16377
554	8.34858	13.68848	1.0242	1.03637
555	8.44166	13.65295	1.07127	1.10647
556	8.41125	13.72872	0.96582	1.16919
557	8.49139	13.71053	0.98732	1.20412
558	8.43646	13.62427	1.06561	1.16054
559	8.59557	13.6841	1.07183	1.07822
560	8.41854	13.77934	0.9992	1.33187
561	8.61048	13.71545	1.12659	1.40254
562	8.47682	13.65852	1.16472	0.98898
563	8.43646	13.82226	1.03676	1.08076
564	8.53278	13.82975	1.0216	1.2688
565	8.47693	13.70368	1.03461	1.20804
566	8.55267	13.85907	1.06165	1.24897
567	8.49774	13.73889	1.00881	1.56845
568	8.60852	13.82226	1.01866	1.22856
569	8.41819	13.75462	1.03065	1.16608
570	8.51509	13.76725	0.97046	1.32691
571	8.65014	13.80064	1.16483	1.47126
572	8.4597	13.85394	1.00768	1.13748
573	8.42004	13.7634	1.0629	1.47587
574	8.56157	13.84088	1.06142	1.27226
575	8.58851	13.84356	1.08168	1.16123
576	8.71813	13.76554	1.01266	1.31907
577	8.71952	13.8412	1.16721	1.13679
578	8.50815	13.768	1.01176	1.25416

579	8.3672	13.89214	1.04445	1.31953
580	8.68136	13.90038	0.98641	1.01712
581	8.59661	13.8519	0.96492	1.50192
582	8.68171	13.8137	1.04728	1.11442
583	8.7179	13.82814	1.10057	1.18671
584	8.78739	14.00976	0.94353	1.41926
585	8.85284	13.80075	1.04592	1.18671
586	8.90938	13.90541	1.06686	1.35539
587	8.81572	13.92553	0.98347	1.16827
588	9.02709	13.90135	1.09729	1.33083
589	9.34877	13.83649	1.17479	1.08087
590	9.57656	14.04893	1.21563	1.20527
591	9.54638	13.79261	1.09073	1.18418
592	9.3275	14.00173	1.13836	1.11984
593	9.31293	13.91526	1.1878	1.22003
594	9.32171	13.96256	1.10668	1.06208
595	9.13116	13.99938	1.12591	1.17184
596	9.20192	14.047	1.03472	1.41891
597	9.19129	13.8824	1.15624	1.17449
598	9.14029	13.92136	1.10759	1.15651
599	9.08722	13.94126	1.22005	1.25658
600	9.05068	13.77656	1.08643	1.45062
601	8.96049	13.86196	1.25365	1.53317
602	9.03738	14.07697	1.0879	1.20919
603	9.08907	13.91462	1.02431	1.18106
604	9.03311	13.81637	1.09061	1.24909
605	9.06062	14.00109	0.93991	1.26915
606	8.93482	13.92575	1.0354	1.95376
607	8.92048	14.02752	1.02058	1.30454
608	8.9369	14.0317	1.07489	1.19017
609	8.75271	13.87213	1.24437	1.44347
610	8.87319	13.94918	1.19108	1.27387
611	8.91748	14.07022	1.17728	1.4188

612	8.9428	13.99124	1.16868	1.3321
613	9.03704	14.06798	1.05305	1.28517
614	8.8666	14.09708	1.13033	1.28679
615	8.84521	14.09141	1.12874	1.51956
616	8.87816	14.17061	1.10023	1.27122
617	8.94731	14.02485	1.16348	1.85357
618	8.85434	14.11196	1.15997	1.49109
619	8.88892	13.92029	1.21688	1.21507
620	8.95263	13.97294	1.12048	1.42975
621	8.92037	13.9997	1.1594	1.4128
622	8.78774	13.86057	1.09638	1.44866
623	8.89111	14.07311	1.10238	1.13402
624	8.89215	14.00687	1.15986	1.24067
625	8.89851	13.98065	1.04491	1.73724
626	8.95587	13.98161	1.03834	1.45096
627	8.81977	14.09559	1.15228	1.19686
628	9.00848	13.96716	1.11483	1.34363
629	8.91065	14.03394	1.19414	1.98892
630	8.87053	14.03266	1.15691	1.29359
631	8.94627	14.05685	1.14062	1.47783
632	9.02039	14.09066	1.06086	1.31538
633	8.91771	14.07525		1.3623
634	8.98558	13.91387		1.68674
635	9.04802	13.8869		1.27376
636	9.03438	13.97851		1.49166
637	8.97055	14.04379		1.38732
638	9.06421	13.99081		1.32322
639	9.04016	13.85212		1.75361
640	8.88186	14.02752		1.16135
641	8.99529	13.96631		1.7128
642	9.03923	14.00376		1.35493
643	9.12931	14.11817		1.54032
644	9.09115	13.98771		1.42087

645	9.08976	13.9128		1.37153
646	8.948	13.90434		1.38248
647	8.99067	14.00858		1.35792
648	9.17024	13.95314		1.24298
649	9.05739	13.87802		1.46515
650	8.98662	13.88679		1.27226
651	9.10954	14.08499		1.93266
652	8.99691	13.95571		1.61606
653	9.05854	13.84998		1.34224
654	9.21961	13.92189		2.10641
655	9.07589	14.00783		1.16561
656	9.11844	13.77581		1.41557
657	9.07126	13.8305		1.60961
658	9.17359	13.83596		1.78935
659	9.1951	13.80503		1.37706
660	9.03854	13.90145		1.33925
661	9.23684	13.81177		1.35885
662	9.0856	13.92243		1.37775
663	9.17868	13.88454		1.37107
664	9.27963	13.8899		1.30466
665	9.14411	13.85008		1.5681
666	9.25349	13.88872		1.33994
667	9.30761	13.93945		1.34305
668	9.16458	14.12256		1.38848
669	9.2491	13.73878		1.3834
670	9.1396	13.79722		1.39874
671	9.13659	13.80021		1.64777
672	9.34079	13.89953		1.29428
673	9.29697	13.88668		1.51807
674	9.32969	13.78855		1.52902
675	9.13601	13.8717		1.48717
676	9.18099	13.99542		1.3894
677	9.14977	13.79005		1.72571

678	9.21626	13.87416		1.54574
679	9.19198	13.87887		1.43575
680	9.20898	13.94469		1.29786
681	9.22967	13.85019		1.36634
682	9.26621	13.94159		1.42629
683	9.32634	13.88155		1.42237
684	9.22979	13.93816		1.88989
685	9.17394	13.85897		1.46641
686	9.44023	13.89204		1.48959
687	9.38392	13.96299		1.63912
688	9.41052	13.92885		1.9699
689	9.38045	13.90873		1.41534
690	9.18296	14.0135		1.76629
691	9.2025	13.77506		1.47887
692	9.28032	13.75794		1.54539
693	9.41144	13.85511		1.48463
694	9.25396	13.96181		1.80146
695	9.37271	13.75302		1.58159
696	9.33594	13.95325		1.44947
697	9.30055	13.88594		1.80941
698	9.28483	13.89097		1.72836
699	9.37641	13.922		1.80561
700	9.41526	13.74981		1.51668

Table Apx. 2. 13: Time course of percent vesicle fusion of all constructs at pH 8.4 in lipid:protein 600:1.

Time (s)	G10V	FPHM	V2E	L9R
1	0.65137	0.50513	0.26109	0.23046
2	0.67558	0.61244	0.31355	0.26516
3	0.70387	0.59398	0.30473	0.2613
4	0.74954	0.77578	0.3303	0.26697
5	0.68376	0.75494	0.41909	0.16958

6	0.72659	0.92584	0.46363	0.26266
7	0.68705	0.92023	0.37829	0.27116
8	0.75386	0.96125	0.31853	0.41073
9	0.81862	0.9362	0.41351	0.22763
10	0.93667	1.04643	0.37657	0.27241
11	0.89055	1.08605	0.42051	0.15756
12	0.92134	1.13668	0.39433	0.27366
13	0.7842	1.12286	0.41097	0.19124
14	0.76613	1.20329	0.43116	0.34565
15	1.04689	1.27703	0.40011	0.20529
16	1.17039	1.31125	0.38276	0.33907
17	1.44479	1.37084	0.47175	0.18931
18	1.76724	1.27616	0.38276	0.29633
19	2.07163	1.38628	0.49083	0.41458
20	2.13117	1.39287	0.34207	0.30143
21	2.18786	1.48323	0.54593	0.23636
22	2.33239	1.50093	0.48677	0.33318
23	2.53611	1.55437	0.39159	0.25869
24	2.677	1.60576	0.43451	0.4046
25	2.69915	1.4788	0.37819	0.20121
26	2.77289	1.59399	0.31822	0.41957
27	2.96468	1.72937	0.36947	0.3105
28	2.98002	1.53656	0.37505	0.291
29	3.07876	1.60608	0.47003	0.46945
30	3.13886	1.70238	0.43431	0.22321
31	3.21704	1.78951	0.37241	0.19657
32	3.34293	1.86184	0.40661	0.43147
33	3.37792	1.87512	0.38499	0.40948
34	3.40667	1.89692	0.5096	0.31323
35	3.48847	1.96958	0.54146	0.24475
36	3.50552	1.88602	0.47754	0.21652
37	3.52381	2.05314	0.43979	0.3045
38	3.65538	2.01902	0.3577	0.3664

39	3.50245	2.12752	0.45582	0.21595
40	3.77116	2.10453	0.40133	0.32808
41	3.69458	2.0946	0.32451	0.43998
42	3.6847	2.06728	0.49864	0.42444
43	3.81241	2.11597	0.37738	0.33851
44	3.84945	2.22177	0.38327	0.41243
45	3.92035	2.25664	0.51001	0.36288
46	3.92353	2.39019	0.37931	0.20688
47	3.96057	2.17783	0.46069	0.36617
48	4.10736	2.3185	0.37911	0.39735
49	3.89251	2.24649	0.49976	0.46571
50	4.18804	2.14501	0.59088	0.5148
51	3.94421	2.1666	0.41797	0.50074
52	4.10282	2.22004	0.55516	0.3825
53	4.13043	2.33167	0.41137	0.43544
54	4.22292	2.40519	0.46363	0.4546
55	4.17E+00	2.41145	0.51457	0.29327
56	4.03E+00	2.4908	0.52634	0.39553
57	4.19E+00	2.46241	0.44253	0.55176
58	4.13736	2.51704	0.41351	0.37297
59	4.23814	2.52675	0.49773	0.4105
60	4.40641	2.54996	0.43512	0.52217
61	4.30495	2.63072	0.38946	0.41832
62	4.12475	2.61193	0.47287	0.59155
63	4.43152	2.74137	0.53568	0.39757
64	4.3429	2.60815	0.46729	0.48442
65	4.45084	2.739	0.40153	0.5114
66	4.37562	2.79017	0.46252	0.33953
67	4.3421	2.79147	0.52533	0.35086
68	4.42357	2.82504	0.62873	0.46208
69	4.40221	2.96388	0.52868	0.77907
70	4.39187	2.83508	0.49083	0.67828
71	4.35563	2.92361	0.49682	0.6403

72	4.33586	3.07885	0.59707	0.66955
73	4.5965	3.00857	0.63634	0.41968
74	4.65172	3.00609	0.5233	0.40732
75	4.64547	3.01742	0.61858	0.36742
76	4.56253	3.0876	0.49854	0.57001
77	4.52526	3.16349	0.5442	0.51662
78	4.62331	3.18152	0.62812	0.60198
79	4.60593	3.11923	0.52756	0.50562
80	4.5523	3.06115	0.54035	0.46514
81	4.63161	3.27037	0.58926	0.62829
82	4.61536	3.11836	0.6056	0.44202
83	4.75057	3.27199	0.58824	0.46367
84	4.62934	3.27706	0.51995	0.3885
85	4.87396	3.08986	0.60732	0.51321
86	4.67001	3.36246	0.46648	0.59813
87	4.67081	3.31258	0.62701	1.17735
88	4.76625	3.33126	0.60265	1.21011
89	4.75352	3.42453	0.59941	1.24583
90	4.76602	3.36181	0.5919	1.04538
91	4.79136	3.57006	0.62092	1.01602
92	4.68456	3.38005	0.60874	0.88961
93	4.7842	3.37433	0.63462	0.83905
94	4.82488	3.44299	0.58013	0.87759
95	4.77136	3.60407	0.57383	0.66219
96	4.76784	3.48315	0.6336	0.71094
97	4.72773	3.59165	0.5436	0.68123
98	4.71819	3.66129	0.56338	0.76275
99	4.80874	3.64423	0.64	0.50845
100	4.83294	3.76406	0.60184	0.7284
101	4.85146	3.65211	0.57536	0.83179
102	4.87033	3.78652	0.64619	0.69983
103	4.86055	3.75283	0.64943	0.60085
104	4.87805	3.77151	0.61179	0.67239

105	4.82226	3.69151	0.69296	0.6131
106	4.99781	3.8935	0.65248	0.63452
107	4.93498	3.8745	0.53396	0.62919
108	4.97679	3.96152	0.59687	0.64439
109	5.04007	3.91499	0.64304	0.61242
110	4.96758	3.92125	0.57505	0.52217
111	4.92066	3.97145	0.58682	0.69132
112	4.93509	3.96692	0.47236	0.50233
113	5.00497	4.07919	0.59717	0.56423
114	5.03644	4.0481	0.68728	0.76978
115	4.84044	4.05836	0.6679	0.74574
116	5.03076	4.00233	0.72138	0.66275
117	4.98849	3.98872	0.64284	0.74347
118	5.10563	4.03093	0.69317	0.71581
119	4.95E+00	4.05123	0.67094	0.76127
120	5.03E+00	4.10024	0.69144	0.76626
121	5.12E+00	4.09744	0.69266	0.83735
122	5.06E+00	4.07293	0.67754	0.82624
123	5.02E+00	4.02478	0.62173	0.87952
124	5.15E+00	4.21943	0.76095	0.71728
125	5.05E+00	4.24404	0.68738	0.63974
126	5.13E+00	4.05933	0.70139	0.75028
127	5.12E+00	4.21813	0.64598	0.70753
128	5.07E+00	4.2516	0.59971	0.6657
129	5.05E+00	4.37327	0.6608	0.7539
130	5.19E+00	4.35135	0.72777	0.86002
131	5.12E+00	4.17571	0.737	0.792
132	5.01E+00	4.23185	0.67003	0.62398
133	5.18E+00	4.333	0.67785	0.80163
134	5.06E+00	4.35546	0.71448	0.72103
135	5.08E+00	4.29608	0.77171	0.81807
136	5.21E+00	4.45726	0.70291	0.85435
137	5.26E+00	4.51524	0.74999	0.60833

138	5.17631	4.45089	0.75801	0.82442
139	5.13677	4.47421	0.80438	0.68758
140	5.23232	4.49246	0.68535	0.77408
141	5.18335	4.44549	0.73031	0.76694
142	5.22891	4.52528	0.78551	0.71672
143	5.19835	4.53672	0.72899	0.69495
144	5.24493	4.41645	0.7163	0.73894
145	5.15608	4.49699	0.71529	0.74347
146	5.17369	4.62287	0.81686	0.67046
147	5.32617	4.57526	0.77049	0.91036
148	5.17835	4.59728	0.77638	0.84846
149	5.30867	4.57882	0.75131	0.79347
150	5.19267	4.60635	0.79677	0.75878
151	5.29436	4.58433	0.67409	0.7776
152	5.25834	4.5297	0.77688	0.78157
153	5.34435	4.53348	0.73842	0.77114
154	5.31742	4.6599	0.68515	0.81025
155	5.2914	4.62211	0.72462	0.80356
156	5.22607	4.54546	0.78419	0.78145
157	5.20005	4.65245	0.74614	0.7666
158	5.32935	4.74292	0.75578	0.75889
159	5.47888	4.72144	0.73497	0.84789
160	5.29992	4.73785	0.70403	0.76479
161	5.37991	4.74616	0.83736	0.7954
162	5.37241	4.84051	0.75334	0.83315
163	5.34333	4.88888	0.75131	1.01591
164	5.26254	4.82777	0.74969	0.7157
165	5.37923	4.73677	0.86801	0.79483
166	5.39059	4.67437	0.86496	0.75889
167	5.4474	4.86794	0.71275	0.84676
168	5.47626	4.82432	0.78632	0.82238
169	5.35242	4.81525	0.76521	0.87272
170	5.40184	4.85714	0.75628	0.98688

171	5.44422	4.93616	0.77526	0.8844
172	5.46479	4.90691	0.81382	0.86932
173	5.41048	4.90011	0.7849	0.85038
174	5.44661	4.83533	0.75943	0.80118
175	5.44877	4.94307	0.75953	0.74653
176	5.38287	5.04704	0.79545	0.87895
177	5.58034	5.05481	0.83381	0.98405
178	5.53319	5.06658	0.8401	0.91546
179	5.49558	4.97881	0.78206	1.01443
180	5.51171	5.02296	0.83016	0.84619
181	5.4507	5.10458	0.76197	0.94607
182	5.42559	5.08849	0.82245	0.98394
183	5.54762	5.07198	0.84741	0.8251
184	5.46638	5.26447	0.90362	1.05128
185	5.60693	5.10674	0.90778	0.95639
186	5.36332	5.2053	0.80773	1.04697
187	5.51239	5.15705	0.87694	0.90571
188	5.41798	5.13308	0.90088	0.81547
189	5.52296	5.11009	0.81138	1.04051
190	5.49706	5.21772	0.87897	0.84551
191	5.52614	5.11386	0.82732	0.94516
192	5.44661	5.24741	0.79261	0.95038
193	5.52376	5.09832	0.91357	0.9989
194	5.60829	5.24741	0.87511	0.87635
195	5.4866	5.31056	0.88627	1.06704
196	5.64328	5.31683	0.83787	0.90809
197	5.45672	5.24503	0.81037	0.99765
198	5.46217	5.25432	0.79799	1.00536
199	5.48365	5.38344	0.88658	0.93791
200	5.64158	5.34187	0.85532	1.0803
201	5.49058	5.41528	1.01575	0.96285
202	5.50069	5.29718	0.84629	0.85027
203	5.70509	5.37156	0.80976	0.99788

204	5.53182	5.42791	0.86202	0.89256
205	5.53898	5.37599	0.82042	0.98926
206	5.55602	5.31596	0.8741	1.04686
207	5.50603	5.42111	0.92412	1.17372
208	5.60818	5.45588	0.82569	0.90106
209	5.61977	5.36206	1.00155	1.06738
210	5.68896	5.50554	0.90129	1.05797
211	5.58522	5.42597	0.79606	1.06738
212	5.71418	5.42306	0.8953	1.15343
213	5.55421	5.42338	0.88363	1.02464
214	5.5558	5.4956	0.96623	0.99936
215	5.65953	5.44616	0.79677	1.1023
216	5.6793	5.48492	0.87815	1.14674
217	5.55807	5.3612	0.89155	1.20059
218	5.69464	5.52551	0.89348	0.99029
219	5.67828	5.55995	0.90383	1.18188
220	5.61693	5.60345	0.91052	0.91863
221	5.68578	5.60561	0.98582	1.11035
222	5.6476	5.57323	0.97161	1.19175
223	5.54137	5.53533	0.81544	1.11862
224	5.7318	5.62505	0.91063	1.11001
225	5.47717	5.73279	0.88739	1.19889
226	5.78781	5.51461	0.95751	1.02747
227	5.70316	5.70623	0.93802	1.12429
228	5.86223	5.69608	1.03605	1.20184
229	5.73566	5.70645	0.94056	1.1888
230	5.55614	5.68723	1.04102	1.21284
231	5.70316	5.63012	0.94462	1.14878
232	5.59397	5.71929	0.8816	1.26759
233	5.64999	5.69587	1.04001	1.15581
234	5.74634	5.6719	1.00124	1.28709
235	5.67976	5.75147	0.94137	1.08053
236	5.74202	5.68561	0.93478	1.1786

237	5.69464	5.7601	0.91022	1.27689
238	5.72918	5.74477	1.10728	1.1735
239	5.70521	5.81678	1.01474	1.24764
240	5.86019	5.72901	1.04965	1.20592
241	5.83394	5.71444	1.07867	1.13098
242	5.78804	5.83567	0.9983	1.14946
243	5.59863	5.83632	0.9567	1.07373
244	5.84587	5.931	0.9642	1.3202
245	5.68748	6.02093	0.93904	1.30093
246	5.91654	5.90595	1.01585	1.36884
247	5.69873	5.75773	1.04254	1.28301
248	5.85757	5.8713	1.00023	1.17531
249	5.71964	5.83319	0.92818	1.22225
250	5.86757	6.00743	0.94929	1.221
251	5.87996	5.91869	1.06994	1.16522
252	5.87666	5.92884	0.92808	1.23528
253	5.82735	5.94158	0.8882	1.24469
254	5.7168	5.93499	0.94908	1.24821
255	5.75168	6.01272	1.07674	1.1405
256	5.78486	5.87918	1.0329	1.42235
257	5.68146	5.96263	0.9365	1.26827
258	5.75452	6.0409	1.00063	1.39117
259	5.89461	5.90747	1.07491	1.4109
260	5.78986	6.03227	0.96938	1.65431
261	5.85041	6.16235	1.04001	1.55567
262	5.80963	5.9676	1.10414	1.63231
263	5.86644	6.16905	1.05167	1.42257
264	5.89723	6.08247	1.08577	1.53277
265	5.81701	6.09207	1.12666	1.56792
266	5.92041	6.0002	1.13153	1.5627
267	5.8403	6.03529	1.09673	1.53391
268	5.8653	6.03874	0.9844	1.54513
269	5.93824	6.13958	1.02874	1.39072

270	6.00426	6.08182	1.02793	1.31464
271	5.80054	6.11734	1.08486	1.42734
272	5.84837	6.12479	1.03767	1.4296
273	5.7777	6.04457	1.14493	1.29038
274	5.94711	6.24699	1.07633	1.46237
275	5.86223	6.34588	1.06882	1.46883
276	5.76429	6.04079	1.08729	1.36305
277	5.85064	6.20424	1.05908	1.32235
278	5.89518	6.19323	1.04021	1.68685
279	5.77917	6.30702	1.15305	1.32213
280	6.01244	6.37752	1.12271	1.38153
281	5.90632	6.18708	1.18095	1.36657
282	5.96653	6.22378	1.16319	1.40013
283	5.81644	6.21234	1.15437	1.33913
284	5.73691	6.25401	0.99901	1.39072
285	5.90211	6.28899	1.0879	1.40523
286	5.87973	6.29417	1.07136	1.32054
287	5.93586	6.28143	1.16086	1.46656
288	5.81167	6.17542	1.09105	1.42133
289	5.74816	6.22454	1.22225	1.38074
290	5.90245	6.31231	1.04741	1.2829
291	5.95835	6.35225	1.00814	1.52393
292	6.00869	6.29892	1.12098	1.34412
293	5.9012	6.27064	1.0534	1.33052
294	5.92336	6.33023	1.19435	1.45273
295	5.95426	6.40105	1.11134	1.44139
296	5.86019	5.96814	1.07643	1.56372
297	5.90916	5.90012	1.08181	1.47541
298	5.76849	5.9731	1.19384	1.28007
299	5.8903	5.99901	1.10779	1.28426
300	5.79076	6.17563	0.98348	1.55284
301	6.0305	6.18816	1.12362	1.6051
302	5.99346	6.32721	1.19475	1.40353

303	5.88018	6.27873	1.1019	1.29038
304	6.0388	6.3624	1.01382	1.42382
305	6.05323	6.31069	1.12362	1.36872
306	5.91688	6.39792	1.16959	1.36974
307	6.03084	6.46162	1.29227	1.48073
308	5.87053	6.46064	1.17842	1.35591
309	5.85041	6.38194	1.08577	1.35194
310	5.88632	6.40774	1.10677	1.46747
311	5.89882	6.5564	1.17537	1.46713
312	5.88916	6.45665	1.19151	1.42518
313	5.89098	6.42426	1.10505	1.48629
314	6.1139	6.50761	1.12778	1.57597
315	5.92836	6.39695	1.20744	1.3431
316	5.90518	6.46313	1.11926	1.47733
317	5.88393	6.41768	1.16502	1.45681
318	5.77134	6.50016	1.24691	1.39627
319	5.88609	6.39889	1.15497	1.44128
320	5.95665	6.53837	1.24661	1.64796
321	5.82258	6.5523	1.14046	1.56712
322	5.9095	6.61027	1.2188	1.42337
323	5.8695	6.6228	1.19019	1.40512
324	5.92995	6.53924	1.13732	1.46396
325	5.88859	6.56428	1.15183	1.4974
326	5.95949	6.58652	1.17598	1.46237
327	5.75645	6.65108	1.16644	1.50216
328	5.96369	6.55327	1.31581	1.47291
329	5.88473	6.68768	1.29643	1.67131
330	5.90211	6.58285	1.30993	1.51157
331	5.9896	6.50685	1.22641	1.50545
332	5.9012	6.60844	1.19425	1.50046
333	5.81735	6.6975	1.17233	1.45942
334	5.93688	6.64827	1.16492	1.41112
335	5.9504	6.58447	1.15132	1.34367

336	5.91984	6.66641	1.2324	1.5381
337	5.9888	6.67138	1.21972	1.41487
338	5.99699	6.84228	1.2873	1.472
339	5.98165	6.56957	1.27583	1.40772
340	6.07709	6.62323	1.2601	1.51667
341	5.97937	6.73086	1.14016	1.53549
342	6.18616	6.74932	1.24376	1.53005
343	5.99983	6.72773	1.2809	1.55828
344	6.01244	6.74555	1.31064	1.58935
345	5.90745	6.81885	1.24397	1.6178
346	5.91654	6.79909	1.22672	1.67483
347	5.99994	6.79726	1.20987	1.62801
348	6.00278	6.84746	1.16938	1.58062
349	6.01051	6.78463	1.28425	1.60363
350	5.86757	6.8114	1.26964	1.6339
351	5.89995	6.90079	1.11175	1.53855
352	5.96676	6.76692	1.26548	1.68741
353	6.02369	6.81604	1.26223	1.5932
354	5.9921	6.88535	1.28963	1.71099
355	5.99312	6.93372	1.2462	1.65034
356	5.96051	6.80309	1.28841	1.7102
357	6.00153	6.78096	1.28476	1.67358
358	5.92109	6.87337	1.26964	1.72335
359	5.98403	6.87099	1.26081	1.59025
360	6.03948	6.86592	1.38847	1.55477
361	6.1239	6.95639	1.20977	1.60374
362	6.13526	6.94117	1.32921	1.70748
363	6.03266	6.91245	1.29369	1.58424
364	6.05266	6.86376	1.1565	1.78616
365	6.02187	6.90079	1.33326	1.62755
366	6.14776	7.06305	1.33976	1.76496
367	6.12379	7.00033	1.25564	1.84874
368	6.06959	6.86862	1.25006	1.69954

369	6.10561	6.98824	1.36706	1.66281
370	6.07731	7.06726	1.29227	1.76621
371	6.07936	7.08669	1.27948	1.68821
372	6.12026	6.92454	1.38045	1.74841
373	5.93654	6.92001	1.3152	1.7102
374	6.08288	7.00961	1.25493	1.73877
375	6.01789	6.99828	1.28527	1.80078
376	6.09924	6.90878	1.40024	1.84398
377	6.11038	6.98381	1.30343	1.77187
378	6.04334	7.08691	1.40135	1.7178
379	6.07936	6.99655	1.31764	1.81133
380	6.04823	7.04437	1.30952	1.80441
381	5.99846	7.05744	1.32454	1.86155
382	6.15742	7.07007	1.2803	1.67471
383	6.17071	6.92055	1.20277	1.60907
384	6.1948	6.90511	1.37984	1.71337
385	6.10674	7.12707	1.36056	1.78276
386	6.15208	6.96276	1.31733	1.60624
387	5.90768	7.11368	1.34159	1.91824
388	6.23082	7.07838	1.47604	1.80464
389	6.09708	6.94343	1.34453	1.81258
390	6.1523	7.17349	1.42814	1.88604
391	6.16776	7.13797	1.33438	1.77879
392	6.23831	7.22261	1.43514	1.82697
393	6.29081	7.05873	1.3355	1.93264
394	6.08345	7.04718	1.34392	1.90645
395	5.98017	7.13517	1.40308	1.85792
396	6.01357	7.15773	1.28019	1.75895
397	6.20002	7.14046	1.37893	1.91132
398	6.10038	7.15071	1.41972	1.81666
399	6.17685	7.14283	1.37517	1.8806
400	6.16026	7.14024	1.5149	2.0188
401	6.13265	7.09393	1.48314	1.873

402	6.10958	7.17943	1.48243	1.9323
403	6.17673	7.18796	1.3153	1.82074
404	6.239	7.1288	1.42926	1.80056
405	6.18753	7.18019	1.38928	1.81394
406	6.10254	7.21462	1.41424	1.80249
407	6.24695	7.13063	1.38481	2.01857
408	6.21627	7.11217	1.45574	1.76768
409	6.08572	7.15784	1.44286	1.85804
410	6.12515	7.22434	1.40125	1.89239
411	6.13378	7.26385	1.36706	1.87776
412	6.18548	7.12437	1.35386	1.89556
413	6.1331	7.18915	1.38968	1.90701
414	6.19059	7.19843	1.425	1.9917
415	6.24047	7.19692	1.49512	1.83582
416	6.20071	7.22045	1.46183	1.94783
417	6.22616	7.35011	1.36634	1.91348
418	6.23229	7.0217	1.35518	1.90838
419	6.10447	7.23881	1.53012	1.83242
420	6.17071	7.31438	1.40633	2.02107
421	6.12685	7.27238	1.45432	1.87618
422	6.03278	7.21408	1.46153	2.03864
423	6.21377	7.28814	1.51308	1.94601
424	6.16923	7.26601	1.38207	1.8772
425	5.98335	7.25953	1.40085	1.86529
426	6.1598	7.24971	1.47167	1.95032
427	6.01982	7.13106	1.51216	1.88559
428	6.21468	7.31934	1.43525	2.01619
429	6.28399	7.35454	1.44935	1.88241
430	6.20718	7.38358	1.50719	1.8543
431	6.29717	7.26742	1.391	1.84194
432	6.25956	7.34158	1.53266	1.96053
433	6.31012	7.36631	1.40744	1.74467
434	6.22139	7.34633	1.52962	2.0442

435	6.31967	7.29322	1.46203	1.82697
436	6.22411	7.3839	1.52383	1.86518
437	6.22275	7.34914	1.47604	1.98105
438	6.34603	7.29333	1.52677	1.84579
439	6.24809	7.32291	1.54514	1.90713
440	6.24047	7.41974	1.47908	1.99726
441	6.19616	7.30056	1.398	2.08988
442	6.16071	7.32798	1.5287	2.11732
443	6.2707	7.2251	1.45493	2.0773
444	6.34262	7.35594	1.38502	1.98048
445	6.32001	7.36836	1.55417	1.93286
446	6.17901	7.42871	1.4663	1.9213
447	6.21366	7.50492	1.51297	1.94976
448	6.34535	7.02462	1.61465	1.99216
449	6.16367	6.90511	1.48294	2.10644
450	6.26558	6.97183	1.57315	2.06585
451	6.17082	6.98543	1.52809	1.91892
452	6.23922	7.1465	1.64905	2.11845
453	6.26183	7.19325	1.58705	2.0366
454	6.33501	7.29387	1.64235	2.08818
455	6.25672	7.0976	1.60735	2.1282
456	6.14855	7.24647	1.58857	2.1621
457	6.17401	7.27616	1.49512	2.09181
458	6.20707	7.25273	1.53033	2.10655
459	6.28604	7.28275	1.48213	2.10247
460	6.30126	7.48463	1.57497	2.17265
461	6.45226	7.42385	1.56747	2.13478
462	6.17503	7.32798	1.54849	2.20314
463	6.08515	7.40064	1.6252	2.09238
464	6.25274	7.34353	1.58015	2.10984
465	6.31864	7.33349	1.54433	2.08365
466	6.16367	7.46768	1.54545	2.18376
467	6.25808	7.46606	1.55945	2.0875

468	6.20321	7.38714	1.63241	2.11845
469	6.29183	7.5005	1.57518	2.17491
470	6.42567	7.41348	1.49248	2.09759
471	6.29081	7.43605	1.50404	2.10031
472	6.25649	7.51723	1.52972	2.22174
473	6.27876	7.392	1.54869	2.29498
474	6.39966	7.43313	1.58644	2.18466
475	6.20786	7.39902	1.50486	2.1858
476	6.32205	7.46908	1.60643	2.21199
477	6.3308	7.50298	1.55823	2.10077
478	6.27206	7.58039	1.60714	2.23069
479	6.35114	7.38153	1.56645	2.10632
480	6.36125	7.55156	1.66792	2.25087
481	6.31183	7.42827	1.57558	2.15927
482	6.33092	7.47113	1.66387	2.28704
483	6.28785	7.4721	1.52312	2.27888
484	6.38727	7.53969	1.57051	2.19396
485	6.2073	7.67237	1.61435	2.16018
486	6.4159	7.5249	1.59395	2.25031
487	6.20934	7.48495	1.61445	2.12605
488	6.34978	7.529	1.64388	2.29645
489	6.24468	7.50838	1.64763	2.32955
490	6.244	7.63966	1.62074	2.25371
491	6.31365	7.48495	1.56939	2.43318
492	6.42306	7.53969	1.52201	2.34293
493	6.41374	7.59421	1.62267	2.28591
494	6.33057	7.64732	1.69938	2.3011
495	6.23218	7.53515	1.51693	2.28001
496	6.30035	7.59485	1.67391	2.1307
497	6.18571	7.59626	1.64946	2.19045
498	6.38432	7.61828	1.66488	2.17537
499	6.35978	7.67733	1.66021	2.30416
500	6.41011	7.61385	1.6112	2.3554

501	6.31308	7.7094	1.67117	2.28069
502	6.42977	7.62033	1.57416	2.2918
503	6.40363	7.53073	1.64215	2.11233
504	6.27729	7.64127	1.61414	2.4003
505	6.28751	7.5304	1.58411	2.30609
506	6.5585	7.52004	1.63951	2.22298
507	6.5635	7.59313	1.63961	2.30688
508	6.38659	7.52284	1.69238	2.24282
509	6.36716	7.57542	1.61739	2.37581
510	6.32603	7.64721	1.69684	2.34418
511	6.53589	7.66967	1.62683	2.43987
512	6.3049	7.54573	1.6389	2.31833
513	6.42965	7.66114	1.68863	2.44395
514	6.29672	7.66665	1.70435	2.37139
515	6.42261	7.72678	1.60481	2.39282
516	6.31285	7.59442	1.53743	2.43
517	6.59974	7.57207	1.69958	2.39236
518	6.42545	7.52187	1.60572	2.30801
519	6.42329	7.67604	1.62307	2.441
520	6.43897	7.64581	1.76909	2.40109
521	6.32887	7.56711	1.84764	2.57988
522	6.4551	7.70249	1.60075	2.34724
523	6.3658	7.79512	1.71115	2.29974
524	6.4075	7.70022	1.65179	2.27445
525	6.40863	7.60705	1.6591	2.31674
526	6.39636	7.69234	1.69583	2.42864
527	6.41886	7.72689	1.71684	2.54337
528	6.5719	7.64365	1.7214	2.31436
529	6.34875	7.76359	1.67016	2.33069
530	6.36943	7.6498	1.7146	2.28579
531	6.42749	7.74513	1.71257	2.33477
532	6.53441	7.7122	1.58786	2.57784
533	6.3942	7.71652	1.72688	2.33658

534	6.3216	7.73466	1.83911	2.46741
535	6.3408	7.73984	1.74494	2.49689
536	6.44692	7.74772	1.70557	2.41549
537	6.4434	7.8193	1.60633	2.40891
538	6.55407	7.72462	1.69816	2.35812
539	6.4417	7.8166	1.8384	2.38386
540	6.36602	7.75506	1.68548	2.36164
541	6.55486	7.76294	1.69512	2.55256
542	6.57736	7.76737	1.83241	2.2765
543	6.41215	7.71663	1.9141	2.41946
544	6.55907	7.69417	1.95611	2.32014
545	6.4075	7.70853	1.86702	2.41674
546	6.47396	7.73347	1.7901	2.40155
547	6.31603	7.80062	1.84936	2.51877
548	6.4109	7.76467	1.81587	2.46991
549	6.48464	7.80613	1.82298	2.48907
550	6.37511	7.87198	1.7147	2.5843
551	6.45715	7.68727	1.80035	2.46946
552	6.49123	7.81045	1.79182	2.50324
553	6.32864	7.80397	1.90588	2.3486
554	6.14799	7.6416	1.82379	2.47558
555	6.14435	7.7651	1.88153	2.32377
556	6.25888	7.71188	1.85149	2.51084
557	6.15958	7.80634	1.80065	2.49508
558	6.31183	7.81163	1.81131	2.44281
559	6.43397	7.78356	1.82612	2.5495
560	6.33205	7.76823	1.77569	2.57897
561	6.39409	7.70486	1.84885	2.56696
562	6.30762	7.65488	1.8866	2.2918
563	6.42783	7.71253	1.82135	2.54315
564	6.37284	7.95079	1.87747	2.6835
565	6.38295	7.79328	1.9212	2.59745
566	6.42658	7.68359	1.84398	2.5275

567	6.37023	7.68554	1.79274	2.65913
568	6.29876	7.84456	1.91471	2.57977
569	6.33353	7.71436	1.8314	2.63555
570	6.36318	7.81422	1.82866	2.7284
571	6.47499	7.80688	1.86326	2.72851
572	6.38068	7.80915	1.90629	2.50823
573	6.37193	7.76186	1.76159	2.63441
574	6.41863	7.79166	1.89401	2.52728
575	6.37148	7.86183	1.89096	2.67205
576	6.66735	7.60781	1.8451	2.63498
577	6.30887	7.49143	1.8799	2.51401
578	6.51543	7.58557	1.86215	2.61707
579	6.32308	7.60554	1.98168	2.53136
580	6.35943	7.58309	1.90832	2.45018
581	6.58168	7.68565	1.83678	2.65833
582	6.50714	7.65088	1.91146	2.63192
583	6.53952	7.65974	1.77813	2.72386
584	6.44192	7.5833	1.91471	2.50709
585	6.45874	7.66794	1.88183	2.62908
586	6.53884	7.76381	1.83262	2.55993
587	6.58145	7.64829	1.89523	2.55823
588	6.46521	7.72678	1.87179	2.59314
589	6.32035	7.7691	2.00035	2.62648
590	6.39454	7.66978	1.91035	2.57546
591	6.46646	7.73541	1.97326	2.64008
592	6.45965	7.74977	1.838	2.59371
593	6.44385	7.8397	1.85758	2.80232
594	6.43601	7.8315	1.94332	2.58351
595	6.42102	7.84974	1.81364	2.63146
596	6.58213	7.86388	2.05028	2.74733
597	6.39943	7.84802	1.87534	2.71457
598	6.50771	7.81023	1.93835	2.65845
599	6.46862	7.90545	1.9622	2.61627

600	6.3917	7.8885	1.87808	2.83837
601	6.60235	7.76219	2.00401	2.65232
602	6.48373	7.86734	1.90953	2.70799
603	6.41454	7.8614	1.8518	2.60573
604	6.50998	7.7596	1.85504	2.76706
605	6.58077	7.85957	1.90659	2.64326
606	6.47044	7.91754	1.98726	2.69359
607	6.50453	7.82308	1.9144	2.66162
608	6.44124	7.8152	1.88691	2.7547
609	6.45499	7.78831	1.99883	2.63078
610	6.49703	7.81099	1.97235	2.72058
611	6.52271	7.90005	1.98341	2.51877
612	6.4075	7.95522	1.99416	2.68679
613	6.35205	7.87414	1.99477	2.61185
614	6.45169	7.8587	1.95449	2.79653
615	6.53089	7.93697	2.02247	2.71921
616	6.62462	7.80084	2.06601	2.82136
617	6.64144	7.90804	2.05474	2.87227
618	6.58372	7.94831	2.05383	2.85073
619	6.55191	7.88785	2.23405	2.7369
620	6.39113	7.86928	2.10883	2.79982
621	6.52259	7.96213	2.12253	2.83803
622	6.5852	7.89984	2.08782	2.73282
623	6.66064	7.84834	2.09625	2.98439
624	6.54361	7.85978	2.12263	2.90265
625	6.59985	7.88958	2.08478	3.07997
626	6.59679	7.81066	2.17052	2.95673
627	6.51691	7.91193	2.15886	2.96229
628	6.69848	7.80494	2.16758	2.90152
629	6.66144	7.94755	2.24003	2.98791
630	6.45419	7.90372	2.16474	2.99312
631	6.51066	7.87371	2.20553	2.87703
632	6.56066	7.93082	2.18564	2.8997

633	6.66121	7.96483	2.20127	2.95356
634	6.50294	7.95165	2.24724	2.89551
635	6.65167	8.0567	2.30082	2.88587
636	6.65871	8.00801	2.20442	2.83701
637	6.86289	7.96601	2.2239	2.93598
638	6.4993	7.76068	2.20858	2.91331
639	6.66189	8.04191	2.25637	2.94233
640	6.54986	7.96364	2.20766	2.92011
641	6.50839	8.04698	2.3064	2.77477
642	6.49646	7.94701	2.25546	2.88077
643	6.60929	7.99819	2.3133	2.83179
644	6.43954	8.012	2.26317	2.75107
645	6.60735	7.90739	2.23973	2.77703
646	6.60292	8.04353	2.27372	2.77239
647	6.52191	8.00121	2.21111	2.91739
648	6.52964	7.88202	2.20695	2.83871
649	6.57077	8.04266	2.29503	2.80719
650	6.69234	7.9306	2.3686	2.86853
651	6.62474	7.89606	2.2719	2.7021
652	6.68564	8.00207	2.2375	2.85469
653	6.69598	7.90005	2.2858	2.93394
654	6.722	7.90988	2.21203	2.87998
655	6.71245	8.02852	2.18859	2.87907
656	6.57747	7.96914	2.24521	2.74506
657	6.59258	7.93168	2.25099	2.98247
658	6.48339	7.85125	2.27078	2.81252
659	6.61065	8.02571	2.19417	3.00729
660	6.50305	7.82815	2.2584	2.89914
661	6.5752	7.90966	2.16606	2.93088
662	6.60554	7.99128	2.27342	2.84869
663	6.59645	8.03079	2.25343	2.72681
664	6.68075	8.07883	2.14018	2.88859
665	6.72745	8.03781	2.12831	2.81671

666	6.70586	7.96321	2.08356	2.83996
667	6.5193	8.03144	2.30843	2.69643
668	6.50703	8.14576	2.23669	2.77828
669	6.62462	7.92207	2.22086	2.93213
670	6.65973	8.07246	2.16383	2.81139
671	6.61224	7.97713	2.11715	2.90231
672	6.54134	8.02064	2.14993	2.79121
673	6.53714	7.90588	2.2032	2.97067
674	6.56929	7.99937	2.1616	2.8166
675	6.53032	8.04126	2.08346	2.78837
676	6.48442	8.05929	2.19681	2.9887
677	6.6219	7.91732	2.21761	2.98553
678	6.56827	7.98016	2.31482	2.95242
679	6.77108	8.08369	2.30995	2.91535
680	6.48351	7.94809	2.2305	2.85322
681	6.59395	7.99538	2.19792	3.0294
682	6.71484	7.95727	2.22836	3.00809
683	6.55645	7.93363	2.06276	3.00163
684	6.59224	8.07311	2.12608	2.87941
685	6.54918	8.05195	2.079	2.78622
686	6.64019	8.03403	2.19711	2.8759
687	6.57213	8.0052	2.26682	3.06126
688	6.6061	8.00164	2.20969	2.94607
689	6.5827	8.0377	2.23557	3.01353
690	6.67757	8.10809	2.16515	3.02283
691	6.68575	7.93654	2.238	3.07724
692	6.67734	8.11899	2.19894	3.0404
693	6.60372	8.23818	2.19549	2.764
694	6.58349	8.27855	2.0997	2.98405
695	6.64189	8.07948	2.17732	3.16874
696	6.63076	8.2059	2.1893	3.12804
697	6.66053	8.3118	2.19052	2.95979
698	6.69575	8.19121	2.14049	2.8895

699	6.65098	8.31753	2.17306	3.00945
700	6.60258	8.33728	2.26997	

Table Apx. 2. 14: Mean residue molar ellipticity of all constructs at 22 °C from 260-180 nm.

Wavelength (nm)	FPHM	V2E	G10V	L9R
260	-56.46886	-111.47472	-36.68728	-21.29167
259.5	-54.91978	-111.77036	-71.99549	-65.08916
259	-67.12805	-105.17156	-91.15157	-65.63777
258.5	-60.44301	-90.40434	-110.08882	-85.24148
258	-55.69843	-84.69534	-127.89769	-127.60591
257.5	-73.402	-95.68882	-177.9689	-127.39993
257	-59.37524	-76.65004	-180.76883	-107.6979
256.5	-44.36408	-55.74765	-167.43079	-102.03913
256	-54.93004	-58.73988	-176.58738	-111.40353
255.5	-66.62045	-82.77244	-195.78877	-144.05293
255	-73.31042	-111.04155	-220.84186	-136.18638
254.5	-84.48912	-121.92262	-239.8937	-104.45955
254	-95.22716	-137.63646	-254.80423	-158.23551
253.5	-112.35086	-149.97762	-260.69348	-181.33587
253	-125.70452	-167.05808	-276.80167	-180.3153
252.5	-118.90326	-157.3497	-284.23104	-142.17645
252	-127.74149	-146.08817	-274.00303	-105.52145
251.5	-169.18892	-154.37147	-291.92389	-150.80959
251	-190.6301	-174.36181	-325.15796	-174.44589
250.5	-221.33579	-207.87134	-362.49126	-190.75159
250	-273.00422	-272.09458	-419.85783	-244.22291
249.5	-314.71202	-330.57547	-501.25463	-310.07633
249	-371.85727	-375.86823	-577.03732	-373.27267
248.5	-443.86256	-430.45802	-676.48963	-439.77402
248	-495.96548	-474.59416	-728.93415	-490.7096
247.5	-573.77695	-540.07572	-781.62467	-542.44642

247	-657.39954	-594.50988	-878.14305	-584.39823
246.5	-771.34261	-664.17488	-992.52272	-638.79212
246	-901.50752	-735.32221	-1087.73986	-697.91687
245.5	-1045.80803	-850.31745	-1235.34324	-785.89474
245	-1191.20916	-972.31253	-1364.23078	-859.52738
244.5	-1346.92656	-1113.8825	-1528.22591	-954.51788
244	-1493.39545	-1229.03832	-1670.65671	-1052.44142
243.5	-1655.47428	-1369.00244	-1838.12181	-1158.95744
243	-1858.51019	-1541.40883	-2026.32908	-1305.68943
242.5	-2062.56869	-1760.90775	-2268.25621	-1474.81252
242	-2289.02565	-1963.6482	-2497.83127	-1661.52718
241.5	-2547.43761	-2165.0175	-2775.37742	-1845.75542
241	-2821.36093	-2393.71094	-3086.67815	-2046.63534
240.5	-3150.01963	-2685.02423	-3464.71114	-2298.73679
240	-3498.09527	-2991.70427	-3863.99125	-2548.80512
239.5	-3877.78913	-3297.12433	-4295.09025	-2809.43906
239	-4300.63721	-3625.35156	-4746.71129	-3084.89151
238.5	-4698.25724	-3980.91939	-5189.22366	-3370.52295
238	-5155.8365	-4385.61384	-5694.88826	-3704.91618
237.5	-5668.15935	-4802.22862	-6238.58016	-4047.23528
237	-6205.94434	-5243.17819	-6822.5134	-4426.29737
236.5	-6751.77865	-5700.18625	-7417.84706	-4803.57964
236	-7299.13248	-6174.241	-8021.33775	-5181.24854
235.5	-7892.07175	-6691.20074	-8693.06264	-5646.26871
235	-8561.02782	-7208.69576	-9409.00381	-6087.96454
234.5	-9196.88311	-7748.71384	-10158.6089	-6542.3791
234	-9.86E+03	-8304.58452	-10909.44403	-7035.49645
233.5	-1.06E+04	-8905.99543	-11679.76539	-7537.3796
233	-1.13E+04	-9515.76499	-12474.23415	-8085.05816
232.5	-12029.71021	-10159.09266	-13319.91092	-8623.47099
232	-12775.46337	-10795.99694	-14149.59733	-9169.81635
231.5	-13491.60653	-11447.43621	-15026.47798	-9741.82582
231	-14262.04154	-12148.94502	-15873.90269	-10304.90284

230.5	-15031.81946	-12816.36042	-16723.85219	-10838.31617
230	-15742.95233	-13469.77612	-17482.52065	-11326.33403
229.5	-16447.88393	-14110.42738	-18319.78144	-11837.21628
229	-17231.41962	-14737.16128	-19169.92516	-12304.6362
228.5	-17941.69006	-15365.33633	-19952.8705	-12799.72003
228	-18619.96856	-15962.46498	-20674.9618	-13261.27387
227.5	-19282.55909	-16536.86469	-21385.65917	-13725.0275
227	-19862.72622	-17061.89484	-22053.82345	-14150.9849
226.5	-20440.75782	-17592.11313	-22683.53316	-14569.80969
226	-20939.36397	-18056.94455	-23191.40534	-14978.63547
225.5	-21359.53031	-18485.0885	-23659.39871	-15387.92787
225	-21817.0685	-18922.70285	-24106.28739	-15693.49732
224.5	-22222.28611	-19248.56659	-24504.75179	-15965.13682
224	-22523.35535	-19503.23772	-24852.39661	-16206.9793
223.5	-22900.11285	-19776.93198	-25255.58692	-16388.49448
223	-23194.8987	-19995.45092	-25557.85017	-16608.07253
222.5	-23490.75232	-20253.9102	-25849.49634	-16819.91801
222	-23708.24825	-20469.83508	-26050.83253	-16944.50555
221.5	-23829.11127	-20602.09113	-26184.84087	-16986.90131
221	-23964.9641	-20784.04613	-26369.28037	-17063.76029
220.5	-24058.64012	-20939.48405	-26466.90577	-17032.29677
220	-24021.35041	-21048.27	-26502.25289	-17087.09129
219.5	-24076.42255	-21092.24555	-26520.31489	-17009.23241
219	-24072.56216	-21140.33865	-26548.21711	-16884.84485
218.5	-24102.37751	-21100.39832	-26595.60556	-16752.32477
218	-24137.94236	-21098.99835	-26671.86731	-16732.52675
217.5	-24086.93595	-21120.98612	-26668.37144	-16699.33007
217	-24133.30168	-21149.47964	-26738.80674	-16665.00017
216.5	-24165.25256	-21111.18633	-26831.1236	-16567.54325
216	-24268.33315	-21163.23229	-26964.67877	-16496.01706
215.5	-24506.60948	-21188.18471	-27087.61685	-16416.02506
215	-24664.72114	-21319.32902	-27210.16651	-16412.42542
214.5	-24866.28271	-21503.87808	-27341.65005	-16397.42692

214	-25201.35623	-21647.78683	-27576.77966	-16347.43192
213.5	-25608.83257	-21896.9816	-27735.25908	-16202.9797
213	-26032.9825	-22248.2507	-28041.98928	-16246.10872
212.5	-26384.31894	-22643.9071	-28487.06528	-16374.89584
212	-26854.42392	-23116.1913	-29136.52019	-16545.34547
211.5	-27412.9893	-23560.18787	-29740.20509	-16583.34167
211	-28041.08275	-24084.97097	-30388.04154	-16712.06213
210.5	-28745.93222	-24629.43601	-30955.40824	-17046.76199
210	-29379.11809	-25101.9261	-31629.59318	-17238.20951
209.5	-30001.42095	-25577.7514	-32315.23681	-17359.86401
209	-30619.04207	-25979.79002	-32716.67918	-17516.3817
208.5	-31081.87802	-26328.21801	-33132.75241	-17562.3771
208	-31324.63076	-26662.39923	-33210.69736	-17547.91188
207.5	-31201.30366	-26722.14503	-33189.26897	-17194.21391
207	-30973.74607	-26554.60149	-33181.82407	-16791.32087
206.5	-30654.97653	-26305.32437	-32813.78667	-16306.636
206	-30051.52387	-25796.64093	-32223.43786	-15335.73309
205.5	-29037.18622	-24983.62858	-31222.13015	-14204.04626
205	-27850.32205	-23766.27178	-29860.29469	-13154.88451
204.5	-26442.47117	-22506.00999	-28209.98524	-11797.75356
204	-25046.16039	-21164.0558	-26672.77365	-9968.53648
203.5	-23036.82811	-19863.3184	-24480.02175	-8182.58174
203	-21313.41099	-17858.18989	-22572.44219	-6517.54825
202.5	-19610.81533	-15607.53125	-20107.65984	-4972.43609
202	-1.83E+04	-13390.43072	-16786.51889	-3020.81125
201.5	-1.62E+04	-11060.38551	-13382.05971	-191.61351
201	-1.40E+04	-7980.45015	-9543.46531	1568.58981
200.5	-8.94E+03	-5806.21343	-5332.68379	1931.19355
200	-9.09E+03	-4341.02065	-1859.11645	4098.84345
199.5	-8.56E+03	-589.13646	3424.63811	4847.18195
199	-5.41E+03	3316.08981	7532.49864	8449.48838
198.5	-3.54E+03	4003.65656	12071.56175	9333.66663
198	-4.47E+03	5202.37316	15720.08442	10292.43742

197.5	-9.22E+03	3847.02867	19441.63192	14210.91224
197	-1.08E+04	8394.05912	23465.83111	16787.18795
196.5	-7.76E+03	13054.10837	22923.90657	22222.17778
196	-5.07E+03	11405.19004	21863.88119	22604.40623
195.5	-6.10E+03	10360.19432	26399.83686	16704.06293
195	-5.50E+03	9897.87461	26159.26923	9728.82712
194.5	-2.09E+03	6514.88679	21129.74856	4719.68803
194	3.30E+03	7236.03636	13511.01846	-2383.85495
193.5	2.04E+03	2029.69387	9339.34537	-7878.0122
193	3.16E+02	2527.64283	9576.09343	-15762.29044
192.5	-2304.49185	1066.62526	6939.30134	-17736.0264
192	-3410.83816	-1346.90761	-1218.96445	-15485.18481
191.5	-3097.66619	-671.15003	-2378.35021	-12576.20905
191	-5439.20545	1078.18325	-732.98029	-9667.63324
190.5	-2352.40174	1460.38758	807.1251	-8103.18968
190	78.58314	-352.50807	646.6731	-9443.78895
189.5	348.08221	-3850.89918	-1754.24683	-3356.671
189	-518.52822	-1572.82993	-4096.64785	532.91737
188.5	-3085.83451	5568.83606	-5851.45143	1369.14975
188	-5263.18816	8240.06235	-5404.27143	950.76492
187.5	-6364.38455	5689.27471	-5506.34436	454.79985
187	-9830.39752	3243.69898	-6750.13595	-283.15635
186.5	-7697.03999	1553.62563	-10609.2524	530.23364
186	-3880.77888	4139.71311	-4109.15529	773.67597
185.5	-1045.73821	-2731.28091	-3334.48352	-5119.26807
185	5723.4779	-9223.2123	-2250.80276	-5158.51082
184.5	6204.7123	-11697.41332	-3072.86299	-5340.66593
184	8192.64818	-10108.44667	-993.196	-1820.57128
183.5	8885.58794	-9452.60161	976.94021	1516.12839
183	2971.80931	-10411.5403	1855.41989	-3387.54791
182.5	3471.55304	-8806.67987	-2106.31328	-5258.3675
182	1176.15775	-4887.79153	-417.80498	-1602.19978
181.5	-916.51376	-3291.94032	-2966.62739	-2053.65463

181	-384.38382	-1798.44343	-4965.29378	-37.9628
180.5	-4113.6137	-649.7346	-5285.32123	1941.54585
180	-4340.5142	1376.98228	-4604.35818	1232.97004

Table Apx. 2. 15: Mean residue molar ellipticity of FPHM at 22-97 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	97°C
260	-56.46886	-97.83293	31.37931	96.90315
259.5	-54.91978	-88.33966	15.26838	100.58941
259	-67.12805	-65.29806	27.70653	111.57673
258.5	-60.44301	-57.65901	22.76165	105.58738
258	-55.69843	-57.90419	32.68874	93.06494
257.5	-73.402	-68.53627	23.31538	66.09848
257	-59.37524	-41.21047	30.97891	74.64308
256.5	-44.36408	-30.01432	27.9275	69.9831
256	-54.93004	-50.30045	8.13456	50.02078
255.5	-66.62045	-72.33301	-17.68733	22.0275
255	-73.31042	-81.6735	-32.76163	5.23189
254.5	-84.48912	-86.51008	-61.49509	-8.08813
254	-95.22716	-108.4375	-83.44076	-24.80374
253.5	-112.35086	-137.36823	-90.62238	-71.46031
253	-125.70452	-170.58893	-116.86561	-97.19185
252.5	-118.90326	-166.93388	-123.45054	-119.15911
252	-127.74149	-179.87481	-146.07256	-147.88327
251.5	-169.18892	-215.36123	-203.67912	-189.12372
251	-190.6301	-240.01638	-237.81564	-220.45078
250.5	-221.33579	-289.2388	-300.28892	-270.55411
250	-273.00422	-340.83043	-366.19943	-342.97335
249.5	-314.71202	-385.64954	-441.86189	-415.85831
249	-371.85727	-452.51558	-515.21397	-494.12564
248.5	-443.86256	-526.82806	-581.95442	-580.28212
248	-495.96548	-586.93513	-636.49827	-670.40166
247.5	-573.77695	-682.80008	-720.80265	-765.55613

247	-657.39954	-765.96681	-805.53001	-866.5094
246.5	-771.34261	-881.6142	-922.01781	-984.10341
246	-901.50752	-1013.09329	-1035.19159	-1127.40186
245.5	-1045.80803	-1145.99333	-1167.34196	-1254.04725
245	-1191.20916	-1304.2939	-1322.39483	-1424.6025
244.5	-1346.92656	-1488.75477	-1496.47769	-1616.38168
244	-1493.39545	-1655.51124	-1649.55529	-1793.97188
243.5	-1655.47428	-1854.0461	-1827.45318	-2012.8436
243	-1858.51019	-2055.05736	-2024.20035	-2234.37241
242.5	-2062.56869	-2286.9969	-2277.59397	-2459.02239
242	-2289.02565	-2527.65517	-2530.72886	-2721.08939
241.5	-2547.43761	-2781.67695	-2785.11627	-2964.08442
241	-2821.36093	-3083.32936	-3072.92729	-3240.29934
240.5	-3150.01963	-3403.51985	-3388.99582	-3545.5493
240	-3498.09527	-3728.06765	-3710.39062	-3842.92654
239.5	-3877.78913	-4098.69782	-4040.553	-4155.37982
239	-4300.63721	-4495.17616	-4382.56292	-4513.53354
238.5	-4698.25724	-4889.51075	-4750.84276	-4857.06706
238	-5155.8365	-5344.17418	-5150.04529	-5242.53097
237.5	-5668.15935	-5809.30994	-5564.4833	-5638.79576
237	-6205.94434	-6303.19328	-6044.50371	-6052.8019
236.5	-6751.77865	-6814.94118	-6527.15234	-6495.59669
236	-7299.13248	-7313.67054	-7017.23392	-6922.991
235.5	-7892.07175	-7869.19689	-7501.19666	-7360.8987
235	-8.56E+03	-8440.82188	-8016.12317	-7816.26029
234.5	-9.20E+03	-8989.28455	-8545.91556	-8286.3242
234	-9.86E+03	-9586.16634	-9095.17323	-8749.65298
233.5	-10560.17525	-10214.13658	-9622.4606	-9207.56078
233	-11311.26724	-10842.84604	-10154.34736	-9692.81984
232.5	-12029.71021	-11493.40366	-10739.45565	-10190.07075
232	-12775.46337	-12129.5875	-11307.56261	-10709.74477
231.5	-13491.60653	-12807.66065	-11858.2576	-11230.44549
231	-14262.04154	-13505.28216	-12393.42964	-11757.84029

230.5	-15031.81946	-14109.51512	-12867.20802	-12246.22052
230	-15742.95233	-14752.22876	-13376.63168	-12738.87181
229.5	-16447.88393	-15406.89318	-13889.79234	-13233.78185
229	-17231.41962	-16069.73012	-14421.76123	-13696.82315
228.5	-17941.69006	-16643.32637	-14897.30545	-14114.07366
228	-18619.96856	-17208.66797	-15372.35687	-14488.44922
227.5	-19282.55909	-17809.57442	-15895.25018	-14838.38935
227	-19862.72622	-18333.31417	-16366.11287	-15214.94151
226.5	-20440.75782	-18801.44789	-16763.87809	-15529.76852
226	-20939.36397	-19210.8955	-17117.41523	-15822.50097
225.5	-21359.53031	-19602.72494	-17443.60243	-16128.49837
225	-21817.0685	-20010.07808	-17800.34272	-16385.29635
224.5	-22222.28611	-20278.25188	-18022.26335	-16646.03686
224	-22523.35535	-20528.15045	-18231.0018	-16883.98464
223.5	-22900.11285	-20800.80066	-18492.79752	-17123.32874
223	-23194.8987	-21033.40961	-18749.54211	-17285.13652
222.5	-23490.75232	-21247.53798	-18940.95071	-17469.36741
222	-23708.24825	-21381.091	-19089.65068	-17610.55907
221.5	-23829.11127	-21483.71984	-19201.06272	-17768.30112
221	-23964.9641	-21563.67916	-19433.49625	-17868.0552
220.5	-24058.64012	-21659.9014	-19537.47535	-17911.58724
220	-24021.35041	-21721.58549	-19584.9887	-17974.83191
219.5	-24076.42255	-21802.53044	-19635.91054	-18067.35803
219	-24072.56216	-21857.9722	-19780.05218	-18166.57823
218.5	-24102.37751	-22008.8559	-19892.90153	-18212.82076
218	-24137.94236	-22109.3492	-19942.34499	-18314.38184
217.5	-24086.93595	-22287.00922	-19975.77271	-18466.12796
217	-24133.30168	-22363.88845	-20149.0712	-18582.2271
216.5	-24165.25256	-22414.77165	-20343.64188	-18785.14391
216	-24268.33315	-22592.02099	-20467.66119	-18935.61693
215.5	-24506.60948	-22723.3974	-20608.18902	-19099.47811
215	-24664.72114	-22880.60557	-20842.01879	-19386.1325
214.5	-24866.28271	-23079.70306	-21169.80756	-19651.22621

214	-25201.35623	-23302.3325	-21481.86805	-19959.60555
213.5	-25608.83257	-23633.95631	-21749.04341	-20228.68285
213	-26032.9825	-24060.28284	-22020.69496	-20584.20822
212.5	-26384.31894	-24499.9154	-22579.02822	-21038.33777
212	-26854.42392	-25003.81932	-23096.50082	-21616.86218
211.5	-27412.9893	-25732.98102	-23685.7157	-22077.15192
211	-28041.08275	-26496.18807	-24102.20702	-22650.41963
210.5	-28745.93222	-27170.64725	-24661.77226	-23242.94822
210	-29379.11809	-27758.41195	-25258.54329	-23769.80913
209.5	-30001.42095	-28290.20102	-25943.89367	-24089.23576
209	-30619.04207	-28737.06154	-26566.04348	-24485.82909
208.5	-31081.87802	-29044.53739	-26775.23366	-24799.87581
208	-31324.63076	-29197.59769	-26936.13022	-25073.55272
207.5	-31201.30366	-29413.98479	-27010.25434	-25312.19866
207	-30973.74607	-29549.63228	-27002.53394	-25441.97343
206.5	-30654.97653	-29373.0811	-26768.82736	-25243.45089
206	-30051.52387	-28938.74631	-25848.2099	-24893.42863
205.5	-29037.18622	-28549.70949	-25561.61033	-24690.34755
205	-27850.32205	-27248.67638	-24911.98736	-24186.23829
204.5	-26442.47117	-25671.46121	-24346.38542	-23603.85349
204	-25046.16039	-23875.55914	-23618.65493	-22578.18108
203.5	-23036.82811	-21582.89897	-22404.25135	-21498.42217
203	-2.13E+04	-19517.34464	-21623.83319	-20905.4829
202.5	-1.96E+04	-17945.87899	-19511.31631	-19643.05368
202	-1.83E+04	-16340.73761	-18219.01053	-16855.68882
201.5	-1.62E+04	-15339.99346	-16702.68976	-13711.03266
201	-1.40E+04	-13685.94014	-11841.00988	-13006.84028
200.5	-8.94E+03	-11712.62446	-9442.05769	-10760.50477
200	-9.09E+03	-14619.57923	-5085.44848	-6974.6545
199.5	-8.56E+03	-11807.20398	-4911.82145	-4371.68479
199	-5.41E+03	-11536.03221	-4229.2225	-3213.17805
198.5	-3.54E+03	-10270.60503	-1011.95645	-2147.7149
198	-4.47E+03	-8218.19245	1805.04757	-993.40531

197.5	-9.22E+03	-9675.94091	-1161.10814	-108.43873
197	-1.08E+04	-8219.58876	3032.90027	-173.60578
196.5	-7.76E+03	-2618.45644	4466.46075	-2375.63388
196	-5.07E+03	-4731.35802	5233.53245	-1666.98563
195.5	-6.10E+03	-792.61171	3328.67809	-2303.56782
195	-5.50E+03	-902.83812	1324.58775	-3498.9618
194.5	-2.09E+03	-2310.06888	-508.17115	-1113.00343
194	3.30E+03	621.28027	-2929.46324	557.50172
193.5	2044.85607	-1651.61389	-3150.93215	2996.2201
193	315.84468	-1245.20121	-4399.19465	4740.55724
192.5	-2304.49185	-1915.08541	-3983.84907	4137.39205
192	-3410.83816	-2361.31348	-1180.75	2705.83674
191.5	-3097.66619	-1646.85411	308.29885	2291.50616
191	-5439.20545	-596.33559	-2037.96568	188.79477
190.5	-2352.40174	396.027	-2914.65484	-966.57971
190	78.58314	2182.03539	-5214.80636	-4808.03191
189.5	348.08221	1890.11609	-6419.31304	-7204.55296
189	-518.52822	217.60764	-7454.34036	-4581.66529
188.5	-3085.83451	151.59828	-8830.33864	-5551.5674
188	-5263.18816	-728.13501	-6517.21437	-4649.75597
187.5	-6364.38455	2747.2045	-4283.9224	-5170.04601
187	-9830.39752	-4357.10566	-3670.00632	-4796.08113
186.5	-7697.03999	-7017.32411	-2953.72914	-3594.9787
186	-3880.77888	-4566.75762	1625.81914	-1871.35624
185.5	-1045.73821	-3761.41895	1131.44617	-4492.50674
185	5723.4779	-5975.71733	193.09641	-4405.52479
184.5	6204.7123	-5197.1098	-2154.28921	-6259.08629
184	8192.64818	-4626.71685	-1003.33669	-5840.60373
183.5	8885.58794	737.10836	294.77089	-6258.63454
183	2971.80931	-1811.627	-1233.8278	-6766.56312
182.5	3471.55304	-3934.25758	-3042.34955	-7241.96587
182	1176.15775	-1113.79194	-666.66535	-4272.34138
181.5	-916.51376	-1474.82452	37.30899	-4225.93458

181	-384.38382	-1561.98716	987.68234	-4214.64089
180.5	-4113.6137	-2641.18345	956.74732	-4610.3718
180	-4340.5142	-721.75304	266.27437	-3245.6546

Table Apx. 2. 16: Mean residue molar ellipticity of G10V at 22-97 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	97°C
260	-36.68728	248.9726	42.16381	441.52187
259.5	-71.99549	235.09659	36.11039	419.53673
259	-91.15157	257.7563	42.28727	443.70096
258.5	-110.08882	237.28604	18.60314	457.52
258	-127.89769	226.89748	5.09193	478.32043
257.5	-177.9689	234.7593	-0.5387	487.55535
257	-180.76883	269.24994	33.48344	505.41471
256.5	-167.43079	299.35391	3.52523	498.15949
256	-176.58738	287.25302	-42.17534	492.6904
255.5	-195.78877	245.6075	-63.57071	445.71173
255	-220.84186	243.95085	-62.40309	438.76143
254.5	-239.8937	206.79493	-92.05337	411.05731
254	-254.80423	164.74027	-156.38385	335.45136
253.5	-260.69348	124.04446	-189.45024	329.0688
253	-276.80167	98.95836	-183.02173	300.20652
252.5	-284.23104	114.83932	-201.91043	298.11417
252	-274.00303	119.91545	-234.7962	290.66538
251.5	-291.92389	84.53013	-303.74705	211.85165
251	-325.15796	66.76723	-332.33097	171.68022
250.5	-362.49126	16.23165	-369.46552	138.35034
250	-419.85783	-41.16807	-450.10423	43.29518
249.5	-501.25463	-132.02994	-548.97001	-69.55939
249	-577.03732	-234.10933	-635.16974	-187.4071
248.5	-676.48963	-323.27602	-692.59005	-305.01463
248	-728.93415	-390.40837	-725.04337	-360.35943
247.5	-781.62467	-471.44846	-830.38558	-471.95147
247	-878.14305	-570.04234	-906.11	-570.80042

246.5	-992.52272	-691.9103	-998.88003	-681.9147
246	-1087.73986	-803.07895	-1109.95158	-798.45016
245.5	-1235.34324	-940.00699	-1231.16762	-938.51801
245	-1364.23078	-1117.68781	-1418.89582	-1102.7203
244.5	-1528.22591	-1277.56558	-1615.02059	-1318.71973
244	-1670.65671	-1440.91333	-1742.97589	-1495.34531
243.5	-1838.12181	-1633.09553	-1948.86319	-1656.24595
243	-2026.32908	-1832.58021	-2174.9618	-1834.06919
242.5	-2268.25621	-2083.72608	-2408.69306	-2042.85677
242	-2497.83127	-2323.96354	-2677.13701	-2253.11391
241.5	-2775.37742	-2597.82609	-2933.17062	-2477.28979
241	-3086.67815	-2949.36168	-3213.97312	-2727.71707
240.5	-3464.71114	-3303.66807	-3558.22565	-3018.81296
240	-3863.99125	-3655.16482	-3857.55626	-3364.50915
239.5	-4295.09025	-4027.3131	-4184.10286	-3695.87228
239	-4746.71129	-4455.12339	-4562.2718	-4049.84851
238.5	-5189.22366	-4899.26069	-4916.1056	-4417.74995
238	-5694.88826	-5350.02719	-5339.85032	-4800.347
237.5	-6238.58016	-5828.68296	-5790.55209	-5223.33428
237	-6822.5134	-6353.73022	-6267.42756	-5680.6523
236.5	-7417.84706	-6933.1512	-6785.3536	-6116.6002
236	-8.02E+03	-7492.49035	-7281.83184	-6599.94303
235.5	-8.69E+03	-8049.56366	-7797.2784	-7068.06588
235	-9.41E+03	-8655.44967	-8322.11202	-7530.75071
234.5	-10158.6089	-9273.31227	-8870.96357	-8029.689
234	-10909.44403	-9909.88425	-9423.95836	-8518.91654
233.5	-11679.76539	-10584.26341	-10016.76723	-9033.78046
233	-12474.23415	-11294.83129	-10625.89015	-9540.42261
232.5	-13319.91092	-12028.76971	-11199.86017	-10065.1915
232	-14149.59733	-12747.68884	-11830.41148	-10610.35295
231.5	-15026.47798	-13502.92617	-12438.49859	-11154.73755
231	-15873.90269	-14217.4431	-13053.5127	-11637.16757
230.5	-16723.85219	-14929.82365	-13605.53642	-12110.98739

230	-17482.52065	-15612.10089	-14155.10009	-12571.40638
229.5	-18319.78144	-16307.45527	-14734.70233	-12994.14766
229	-19169.92516	-16998.73113	-15293.84727	-13462.72367
228.5	-19952.8705	-17662.4932	-15805.8627	-13876.53106
228	-20674.9618	-18290.39024	-16288.29272	-14317.33433
227.5	-21385.65917	-18976.03387	-16749.81226	-14759.17342
227	-22053.82345	-19517.69946	-17206.54116	-15167.54279
226.5	-22683.53316	-19983.75068	-17611.99731	-15523.79781
226	-23191.40534	-20420.60491	-17991.62286	-15893.38892
225.5	-23659.39871	-20820.49357	-18354.54593	-16191.44418
225	-24106.28739	-21220.38222	-18729.70453	-16511.25152
224.5	-24504.75179	-21517.79009	-19086.99536	-16748.64697
224	-24852.39661	-21792.53956	-19333.90735	-16911.72282
223.5	-25255.58692	-22067.87166	-19522.36062	-17082.11409
223	-25557.85017	-22361.3305	-19749.98058	-17256.2602
222.5	-25849.49634	-22630.31825	-19948.46829	-17362.62527
222	-26050.83253	-22843.5663	-20132.77831	-17496.69835
221.5	-26184.84087	-22987.28539	-20214.15439	-17571.92428
221	-26369.28037	-23196.71388	-20370.82114	-17751.76736
220.5	-26466.90577	-23296.79934	-20555.84328	-17872.24538
220	-26502.25289	-23382.83657	-20720.2139	-17894.38589
219.5	-26520.31489	-23453.78978	-20769.93293	-17961.06637
219	-26548.21711	-23499.75399	-20797.31724	-18112.42458
218.5	-26595.60556	-23515.22645	-20838.10239	-18136.18355
218	-26671.86731	-23538.46751	-20907.50188	-18144.79374
217.5	-26668.37144	-23592.45928	-20942.46057	-18180.46456
217	-26738.80674	-23641.20724	-20998.0708	-18297.64094
216.5	-26831.1236	-23774.63293	-21095.24303	-18460.19888
216	-26964.67877	-23918.74045	-21239.02685	-18645.54471
215.5	-27087.61685	-24029.1193	-21415.56827	-18678.75547
215	-27210.16651	-24357.86053	-21595.86452	-18899.83686
214.5	-27341.65005	-24549.3565	-21811.96105	-19094.95818
214	-27576.77966	-24842.62113	-21998.3427	-19364.26962

213.5	-27735.25908	-25016.63775	-22189.45024	-19659.28218
213	-28041.98928	-25237.20123	-22568.94632	-20069.27001
212.5	-28487.06528	-25641.10366	-22989.61597	-20489.87493
212	-29136.52019	-26156.6797	-23382.05971	-21153.44278
211.5	-29740.20509	-26668.95409	-23923.33687	-21660.14968
211	-30388.04154	-27235.28498	-24460.47078	-22345.98752
210.5	-30955.40824	-27927.3377	-25255.32796	-22981.45894
210	-31629.59318	-28594.07774	-25926.72916	-23564.55706
209.5	-32315.23681	-29319.40596	-26477.19916	-24117.09869
209	-32716.67918	-29827.66657	-26947.06994	-24525.01489
208.5	-33132.75241	-30099.30859	-27308.56877	-24911.11428
208	-33210.69736	-30259.85965	-27495.59779	-25176.28247
207.5	-33189.26897	-30377.74814	-27309.41036	-25208.91058
207	-33181.82407	-30265.42714	-26932.76277	-25085.71355
206.5	-32813.78667	-29646.91716	-26506.97879	-24880.68726
206	-32223.43786	-29071.78186	-25803.40265	-24584.25046
205.5	-31222.13015	-28296.86408	-24999.93526	-24104.92788
205	-29860.29469	-27170.35244	-23804.80099	-23603.1411
204.5	-28209.98524	-25748.56928	-22385.60737	-22929.0209
204	-2.67E+04	-24487.59614	-20850.72636	-21984.42396
203.5	-2.45E+04	-22708.91058	-19059.67579	-20465.40384
203	-2.26E+04	-20502.88733	-17077.64715	-18937.5793
202.5	-2.01E+04	-18496.51708	-15162.4932	-17162.97227
202	-1.68E+04	-15890.15201	-12983.919	-15519.20139
201.5	-1.34E+04	-13144.79374	-11322.79825	-13490.10798
201	-9.54E+03	-9760.53293	-9667.37447	-11300.26931
200.5	-5.33E+03	-6132.7071	-8489.97851	-8747.96074
200	-1.86E+03	-3209.86224	-6645.97198	-5878.91991
199.5	3.42E+03	559.31779	-3901.87612	-3192.84253
199	7.53E+03	4321.55527	-1215.8829	-980.37781
198.5	1.21E+04	6709.02711	-955.90673	-660.61579
198	1.57E+04	9080.26258	371.88026	4516.90965
197.5	1.94E+04	10239.01391	1269.85525	7837.54564

197	2.35E+04	10602.26066	5718.75728	4860.84496
196.5	2.29E+04	14632.54525	14393.98451	-3200.1968
196	2.19E+04	16018.0102	18446.66857	-824.1707
195.5	2.64E+04	10681.82407	13978.68814	-4777.87632
195	2.62E+04	13712.80783	14743.18305	-6533.39203
194.5	21129.74856	11259.22521	15540.95347	-10206.70948
194	13511.01846	9473.22423	15930.74294	-13306.57482
193.5	9339.34537	6667.40037	10550.59948	-7184.01222
193	9576.09343	-105.61929	2171.945	-5645.33107
192.5	6939.30134	-1226.11156	993.02121	-8795.73763
192	-1218.96445	-1263.50442	2662.02061	-3564.16216
191.5	-2378.35021	-3110.86439	4286.68721	-2227.4128
191	-732.98029	1685.51415	380.40759	-3327.79605
190.5	807.1251	-646.23223	-2093.89647	-3206.38579
190	646.6731	-1088.78214	-1612.23036	-4846.69317
189.5	-1754.24683	595.01256	-1884.44856	-3187.30093
189	-4096.64785	302.04767	-2106.15791	-2574.7404
188.5	-5851.45143	2780.51117	-2317.76808	-2579.07787
188	-5404.27143	110.58925	-1582.65142	-3407.34651
187.5	-5506.34436	-1841.75363	-894.61248	-2277.64327
187	-6750.13595	-3886.78561	-3016.37232	-2799.8032
186.5	-10609.2524	-3871.2031	-4330.06189	-4106.53987
186	-4109.15529	486.61859	-176.25722	647.17741
185.5	-3334.48352	-154.38149	-1940.09115	-1462.47119
185	-2250.80276	-4854.26755	-2071.43874	-4276.99588
184.5	-3072.86299	-3126.96481	-5930.73646	-4341.14509
184	-993.196	-1095.23655	-1986.19779	-5466.69213
183.5	976.94021	-104.13225	547.63964	-5599.82003
183	1855.41989	-2619.79828	-1341.06093	-6233.28456
182.5	-2106.31328	-6063.31408	-3349.42512	-9065.24329
182	-417.80498	-2895.41523	-20.89158	-3970.69296
181.5	-2966.62739	-1996.9314	212.30417	-1850.3703
181	-4965.29378	-3422.64417	1696.16361	-1126.34332

180.5	-5285.32123	-3698.20286	795.71173	6.49792
180	-4604.35818	-3300.61242	2084.1404	2561.02235

Table Apx. 2. 17: Mean residue molar ellipticity of V2E at 22-97 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	97°C
260	-111.47472	50.43641	-28.43351	301.12092
259.5	-111.77036	48.04082	-18.22752	289.77745
259	-105.17156	59.88745	-20.29381	289.37969
258.5	-90.40434	67.92081	-6.53501	297.12071
258	-84.69534	83.39337	3.05071	306.30575
257.5	-95.68882	93.32534	8.94557	316.70382
257	-76.65004	96.53662	42.01106	339.62505
256.5	-55.74765	109.14789	31.06442	343.6232
256	-58.73988	88.0845	9.80731	327.88547
255.5	-82.77244	48.21746	-10.21766	317.07605
255	-111.04155	25.11778	-33.73153	286.40269
254.5	-121.92262	8.93301	-64.27573	262.41585
254	-137.63646	-22.57152	-102.34474	228.26192
253.5	-149.97762	-42.23094	-118.15073	195.99795
253	-167.05808	-61.4583	-123.50214	181.60542
252.5	-157.3497	-64.52629	-126.81656	186.87096
252	-146.08817	-66.38414	-138.81203	185.21529
251.5	-154.37147	-104.47487	-172.65006	154.08653
251	-174.36181	-126.42393	-185.23451	121.99509
250.5	-207.87134	-153.98483	-229.5678	78.53588
250	-272.09458	-207.21171	-290.84188	19.69837
249.5	-330.57547	-264.03775	-356.15953	-45.84574
249	-375.86823	-319.15213	-422.12453	-118.71504
248.5	-430.45802	-374.00174	-484.80429	-193.51094
248	-474.59416	-406.33241	-530.32007	-243.76
247.5	-540.07572	-489.47502	-600.19259	-325.99798
247	-594.50988	-546.08324	-676.87973	-399.81431
246.5	-664.17488	-625.52334	-776.222	-493.57199

246	-735.32221	-716.11791	-880.11833	-596.67983
245.5	-850.31745	-826.83912	-1009.39481	-705.88989
245	-972.31253	-960.26455	-1152.43618	-855.73616
244.5	-1113.8825	-1111.20197	-1308.74511	-992.45976
244	-1229.03832	-1227.556	-1430.97269	-1123.19643
243.5	-1369.00244	-1365.8278	-1564.45797	-1283.64953
243	-1541.40883	-1538.14772	-1748.33777	-1462.97753
242.5	-1760.90775	-1725.95789	-1935.20154	-1670.21847
242	-1963.6482	-1928.67776	-2145.32464	-1877.97411
241.5	-2165.0175	-2124.21248	-2350.8156	-2081.82631
241	-2393.71094	-2356.1382	-2583.44998	-2308.13156
240.5	-2685.02423	-2642.62983	-2853.91005	-2564.96028
240	-2991.70427	-2935.6478	-3116.46631	-2812.56156
239.5	-3297.12433	-3241.29021	-3397.80594	-3084.69526
239	-3625.35156	-3574.49145	-3689.8114	-3365.51701
238.5	-3980.91939	-3900.85754	-3982.09636	-3642.85119
238	-4385.61384	-4296.7157	-4324.24563	-3954.68229
237.5	-4802.22862	-4684.50756	-4684.50011	-4296.59218
237	-5.24E+03	-5111.58095	-5066.66167	-4660.21396
236.5	-5.70E+03	-5540.96018	-5450.5906	-5024.00044
236	-6.17E+03	-5956.87498	-5818.94206	-5362.8345
235.5	-6691.20074	-6401.7774	-6234.68353	-5740.04423
235	-7208.69576	-6899.01403	-6667.31771	-6145.0475
234.5	-7748.71384	-7402.05641	-7116.6391	-6552.06837
234	-8304.58452	-7913.53979	-7567.02912	-6947.97182
233.5	-8905.99543	-8410.07643	-8010.14417	-7330.57556
233	-9515.76499	-8935.14776	-8481.61925	-7725.90255
232.5	-10159.09266	-9502.21821	-8961.47904	-8121.60013
232	-10795.99694	-10051.37727	-9427.1177	-8538.70902
231.5	-11447.43621	-10599.4246	-9884.33057	-8955.65321
231	-12148.94502	-11126.0606	-10312.23808	-9344.96857
230.5	-12816.36042	-11651.87309	-10753.09256	-9712.29616
230	-13469.77612	-12154.25667	-11216.67615	-10122.8993

229.5	-14110.42738	-12681.92206	-11682.56143	-10527.90257
229	-14737.16128	-13176.02934	-12136.11627	-10890.37143
228.5	-15365.33633	-13686.85391	-12586.794	-11201.16491
228	-15962.46498	-14152.05591	-12996.94567	-11564.37493
227.5	-16536.86469	-14650.23958	-13416.05746	-11951.09623
227	-17061.89484	-15089.17154	-13791.23177	-12279.63639
226.5	-17592.11313	-15534.5269	-14148.48584	-12569.59501
226	-18056.94455	-15941.75365	-14482.72307	-12818.87213
225.5	-18485.0885	-16294.29919	-14775.24231	-13124.51866
225	-18922.70285	-16687.81446	-15080.05089	-13418.67719
224.5	-19248.56659	-16959.94404	-15327.07078	-13599.35575
224	-19503.23772	-17210.45643	-15550.08741	-13751.49962
223.5	-19776.93198	-17486.74475	-15758.10201	-13935.01929
223	-19995.45092	-17732.52194	-15947.78534	-14027.70558
222.5	-20253.9102	-17962.44653	-16110.21839	-14181.74353
222	-20469.83508	-18167.50105	-16289.13313	-14277.10623
221.5	-20602.09113	-18235.4408	-16402.69652	-14362.25739
221	-20784.04613	-18383.71416	-16514.36924	-14458.15537
220.5	-20939.48405	-18442.59528	-16630.27542	-14554.79452
220	-21048.27	-18460.01256	-16707.21739	-14595.80542
219.5	-21092.24555	-18422.21335	-16758.14212	-14655.83946
219	-21140.33865	-18442.10117	-16784.94029	-14724.35567
218.5	-21100.39832	-18463.75954	-16792.29745	-14781.30153
218	-21098.99835	-18534.0463	-16918.6434	-14842.52966
217.5	-21120.98612	-18561.67513	-17041.78344	-14900.29903
217	-21149.47964	-18678.98443	-17114.77966	-14970.05051
216.5	-21111.18633	-18756.18869	-17133.60414	-15106.17707
216	-21163.23229	-18809.26405	-17323.904	-15243.33301
215.5	-21188.18471	-18937.23783	-17457.89482	-15375.05378
215	-21319.32902	-19091.81106	-17630.89095	-15577.96716
214.5	-21503.87808	-19274.79546	-17770.84149	-15821.52088
214	-21647.78683	-19551.70141	-17956.9901	-16039.87512
213.5	-21896.9816	-19786.60824	-18190.56981	-16320.07512

213	-22248.2507	-20147.47126	-18467.71709	-16631.85681
212.5	-22643.9071	-20563.55076	-18760.89395	-16988.97284
212	-23116.1913	-20981.44199	-19184.4447	-17400.48185
211.5	-23560.18787	-21446.72634	-19601.83023	-17929.7531
211	-24084.97097	-21968.50363	-20103.88481	-18484.01794
210.5	-24629.43601	-22502.01596	-20611.89911	-19004.51878
210	-25101.9261	-23062.49831	-21116.33758	-19466.71496
209.5	-25577.7514	-23574.51698	-21514.56982	-19903.13521
209	-25979.79002	-23951.2326	-21960.84969	-20337.24963
208.5	-26328.21801	-24268.61417	-22351.27265	-20432.40645
208	-26662.39923	-24533.16745	-22374.65939	-20350.17877
207.5	-26722.14503	-24569.73138	-22323.32364	-20413.79508
207	-26554.60149	-24400.08789	-22229.07795	-20444.38856
206.5	-26305.32437	-23967.04403	-22031.66754	-20249.79264
206	-25796.64093	-23376.17408	-21821.55677	-19927.55234
205.5	-24983.62858	-22648.06583	-21054.39764	-19650.31699
205	-2.38E+04	-21363.75749	-20352.58987	-19174.03875
204.5	-2.25E+04	-19956.33409	-19618.84625	-18686.19016
204	-2.12E+04	-18779.16468	-18580.86946	-18125.3784
203.5	-1.99E+04	-17448.90437	-17253.74377	-16996.34328
203	-1.79E+04	-15749.99885	-15632.00266	-15855.77898
202.5	-1.56E+04	-13773.40504	-13775.4488	-14402.36243
202	-1.34E+04	-12300.47125	-11459.79141	-12513.67854
201.5	-1.11E+04	-10687.58157	-9144.05181	-10910.83571
201	-7.98E+03	-8287.00254	-7198.84206	-9937.4032
200.5	-5.81E+03	-5488.21422	-4412.65492	-9092.80916
200	-4.34E+03	-2615.05453	-177.19588	-5940.65179
199.5	-5.89E+02	-1314.00007	4333.49346	-2183.54241
199	3.32E+03	17.97958	6144.34248	165.18294
198.5	4.00E+03	4616.11488	7983.79813	2849.03079
198	5.20E+03	7353.46919	11697.93338	4355.39094
197.5	3.85E+03	6891.93182	13949.47247	5969.06296
197	8.39E+03	7937.91575	14924.52289	7421.656

196.5	1.31E+04	8724.57571	10372.90387	5562.33032
196	1.14E+04	7759.83125	6229.87466	3043.47024
195.5	10360.19432	7620.86358	6282.44345	-361.61817
195	9897.87461	3748.95249	2998.14336	-3217.35483
194.5	6514.88679	5633.93469	-1954.68776	-2042.99359
194	7236.03636	3268.60199	-5906.85813	-3302.11481
193.5	2029.69387	-1430.25939	-7421.52988	-4159.35388
193	2527.64283	-5461.0795	-5032.13643	-4580.20975
192.5	1066.62526	-5250.38392	-4303.61269	-3677.16694
192	-1346.90761	-5884.90002	-4171.59473	-2089.03615
191.5	-671.15003	-9473.55999	-4813.72316	-2138.55394
191	1078.18325	-10457.08052	-3359.33495	-3492.18553
190.5	1460.38758	-8588.11975	-2826.92693	-2039.69954
190	-352.50807	-5825.44244	-2105.86722	-2008.23726
189.5	-3850.89918	-2128.32592	-2178.16061	-353.16935
189	-1572.82993	-3173.56045	-2094.57664	-773.84611
188.5	5568.83606	-1972.01096	-3229.17067	-1957.5995
188	8240.06235	-1463.10106	-828.47843	-700.42589
187.5	5689.27471	-2282.36386	-2465.87509	-1506.67308
187	3243.69898	-4918.96147	-3723.60915	-2919.76225
186.5	1553.62563	-3517.85028	-3602.38033	-3725.1077
186	4139.71311	-3241.90372	-1862.93692	-958.33342
185.5	-2731.28091	-2816.68324	-3116.83622	-2201.75438
185	-9223.2123	-2743.87653	-4032.07165	-4432.51285
184.5	-11697.41332	-3244.17662	-5674.59366	-5762.15553
184	-10108.44667	-3254.33876	-5329.54674	-4927.56717
183.5	-9452.60161	-3334.75472	-4496.70744	-4344.27353
183	-10411.5403	-5045.37058	-7090.12864	-5863.98281
182.5	-8806.67987	-4114.90481	-8034.76396	-6850.59151
182	-4887.79153	-3632.05906	-8289.46983	-3039.97031
181.5	-3291.94032	-3352.81022	-7243.51937	-1994.13462
181	-1798.44343	-804.60429	-4844.96028	-1941.05514
180.5	-649.7346	2409.25885	-3344.98643	-1819.38534

180	1376.98228	3264.95794	-1423.57032	-727.12415
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Table Apx. 2. 18: Mean residue molar ellipticity of L9R at 22-97 °C from 260-180 nm.

Wavelength (nm)	22°C	50°C	75°C	97°C
260	-21.29167	-65.7151	445.60944	279.6347
259.5	-65.08916	-38.67413	411.10356	284.36823
259	-65.63777	-29.28614	425.74476	314.23124
258.5	-85.24148	-48.79645	416.79499	315.80042
258	-127.60591	-56.76006	406.76599	329.07776
257.5	-127.39993	-45.49238	418.05219	319.98
257	-107.6979	-2.01227	449.13642	350.15298
256.5	-102.03913	3.48882	481.72716	336.96697
256	-111.40353	-16.33003	480.36263	304.60687
255.5	-144.05293	-16.25404	446.02606	257.82355
255	-136.18638	23.10969	428.3725	257.65757
254.5	-104.45955	12.51841	416.39903	246.56734
254	-158.23551	-34.47802	379.82802	202.24111
253.5	-181.33587	-83.6663	338.51282	168.29984
253	-180.3153	-76.14505	321.54985	190.18298
252.5	-142.17645	-64.81119	344.49288	216.00973
252	-105.52145	-89.62904	364.57421	232.6774
251.5	-150.80959	-126.60401	349.3464	183.09636
251	-174.44589	-122.50175	321.26854	178.94677
250.5	-190.75159	-145.72743	288.83778	143.00837
250	-244.22291	-181.69116	247.54791	87.19995
249.5	-310.07633	-250.74826	176.58501	-0.58927
249	-373.27267	-321.59184	110.40963	-91.75682
248.5	-439.77402	-348.44116	52.92371	-157.94021
248	-490.7096	-395.07649	15.0013	-183.30834
247.5	-542.44642	-451.06823	-56.13419	-264.93417
247	-584.39823	-503.09036	-126.24938	-302.45909
246.5	-638.79212	-571.51018	-223.43366	-377.6529
246	-697.91687	-661.14855	-301.37653	-439.07076

245.5	-785.89474	-749.85168	-418.38483	-513.10802
245	-859.52738	-876.04573	-588.77379	-609.38173
244.5	-954.51788	-1025.86408	-742.95904	-723.26767
244	-1052.44142	-1140.71926	-865.21348	-831.50352
243.5	-1158.95744	-1293.95727	-976.69566	-943.39233
243	-1305.68943	-1436.69633	-1129.17375	-1081.37186
242.5	-1474.81252	-1563.25034	-1294.2839	-1258.80745
242	-1661.52718	-1742.6524	-1461.18721	-1426.26404
241.5	-1845.75542	-1872.9727	-1592.79405	-1577.36226
241	-2046.63534	-2052.59474	-1756.10439	-1748.47182
240.5	-2298.73679	-2272.33943	-1971.24954	-1972.32277
240	-2548.80512	-2506.34937	-2167.26994	-2210.38563
239.5	-2809.43906	-2763.90361	-2413.23868	-2437.48958
239	-3084.89151	-3048.52848	-2653.64797	-2686.08472
238.5	-3370.52295	-3323.74096	-2893.64397	-2915.16848
238	-3.70E+03	-3632.90338	-3193.34733	-3178.12219
237.5	-4.05E+03	-3946.89198	-3524.40089	-3457.10096
237	-4.43E+03	-4297.20361	-3905.10282	-3720.92124
236.5	-4803.57964	-4654.24124	-4261.0339	-3973.11602
236	-5181.24854	-5000.3533	-4584.82818	-4229.67037
235.5	-5646.26871	-5366.01673	-4992.18745	-4521.3812
235	-6087.96454	-5768.10319	-5344.52555	-4800.73993
234.5	-6542.3791	-6182.90171	-5690.38429	-5097.71023
234	-7035.49645	-6630.53695	-6038.6628	-5425.25747
233.5	-7537.3796	-7065.89341	-6421.10456	-5709.10242
233	-8085.05816	-7512.0488	-6823.65097	-6037.16962
232.5	-8623.47099	-7978.13552	-7274.47255	-6378.27551
232	-9169.81635	-8485.68476	-7644.0356	-6698.06353
231.5	-9741.82582	-8955.37113	-8026.79732	-7067.22661
231	-10304.90284	-9386.19471	-8430.9569	-7379.06209
230.5	-10838.31617	-9781.75516	-8770.92291	-7666.83332
230	-11326.33403	-10178.04886	-9134.48655	-8016.73166
229.5	-11837.21628	-10618.33817	-9505.7161	-8376.02906

229	-12304.6362	-11065.82675	-9875.3458	-8715.86175
228.5	-12799.72003	-11431.05689	-10243.37566	-9035.89641
228	-13261.27387	-11863.48032	-10565.47679	-9293.07069
227.5	-13725.0275	-12244.10892	-10934.03993	-9572.90938
227	-14150.9849	-12623.33767	-11270.93957	-9836.21638
226.5	-14569.80969	-12985.76809	-11567.7099	-10051.52818
226	-14978.63547	-13302.93637	-11807.0193	-10161.71716
225.5	-15387.92787	-13565.51012	-12029.93034	-10275.37246
225	-15693.49732	-13835.74976	-12279.10542	-10466.15338
224.5	-15965.13682	-14032.93004	-12515.48179	-10614.40523
224	-16206.9793	-14219.84468	-12576.14239	-10682.79839
223.5	-16388.49448	-14435.88974	-12740.32597	-10786.58801
223	-16608.07253	-14603.33967	-12834.64987	-10870.64627
222.5	-16819.91801	-14749.92501	-12927.97387	-11012.76539
222	-16944.50555	-14830.85025	-13027.96387	-11077.09229
221.5	-16986.90131	-14808.78579	-13010.63227	-11060.16065
221	-17063.76029	-14850.98157	-13045.69543	-11146.95197
220.5	-17032.29677	-14773.78929	-13063.22701	-11158.75079
220	-17087.09129	-14788.85445	-13017.76489	-11107.28927
219.5	-17009.23241	-14737.12629	-13033.03003	-11074.55921
219	-16884.84485	-14688.06453	-13000.56661	-11050.62827
218.5	-16752.32477	-14648.46849	-12930.90691	-11089.42439
218	-16732.52675	-14705.39613	-12911.70883	-11212.47875
217.5	-16699.33007	-14712.19545	-12993.83395	-11296.73699
217	-16665.00017	-14718.79479	-13086.35803	-11229.41039
216.5	-16567.54325	-14591.94081	-12995.36713	-11185.41479
216	-16496.01706	-14569.34307	-12936.23971	-11241.87581
215.5	-16416.02506	-14498.35016	-12907.10929	-11295.87041
215	-16412.42542	-14553.94461	-12975.96907	-11223.74429
214.5	-16397.42692	-14486.88464	-13053.29467	-11112.15545
214	-16347.43192	-14468.15318	-13033.69663	-11104.55621
213.5	-16202.9797	-14480.6186	-13070.95957	-11162.35043
213	-16246.10872	-14569.14309	-13222.81105	-11311.60217

212.5	-16374.89584	-14719.52805	-13348.59847	-11395.59377
212	-16545.34547	-14879.24541	-13458.12085	-11550.97824
211.5	-16583.34167	-15085.95807	-13603.7063	-11746.09206
211	-16712.06213	-15342.86571	-13760.09066	-12009.46572
210.5	-17046.76199	-15476.45235	-14032.26344	-12278.37216
210	-17238.20951	-15639.16942	-14283.77162	-12577.00897
209.5	-17359.86401	-15774.42256	-14446.22204	-12650.00167
209	-17516.3817	-15986.46802	-14488.35116	-12797.98687
208.5	-17562.3771	-16079.6587	-14575.67577	-12678.59881
208	-17547.91188	-15903.6763	-14583.54165	-12636.40303
207.5	-17194.21391	-15500.7166	-14407.2926	-12623.60431
207	-16791.32087	-15097.15695	-14092.6574	-12365.03016
206.5	-16306.636	-14473.41932	-13528.64714	-11980.40196
206	-1.53E+04	-13525.84742	-12899.57671	-11494.31723
205.5	-1.42E+04	-12486.21804	-12438.02286	-10573.47599
205	-1.32E+04	-11244.60887	-11614.83852	-9486.38469
204.5	-1.18E+04	-9992.3341	-10128.9871	-8262.57374
204	-9.97E+03	-9002.63307	-8492.75072	-6834.31657
203.5	-8.18E+03	-7473.05269	-6724.39423	-5850.71493
203	-6.52E+03	-5243.23568	-5083.91161	-4741.06589
202.5	-4.97E+03	-3444.59554	-3608.39249	-3162.15045
202	-3.02E+03	-2378.26217	-1184.3549	-3290.29097
201.5	-1.92E+02	-46.84965	389.66103	-1884.71819
201	1.57E+03	1989.85435	336.19571	258.98743
200.5	1.93E+03	3908.92911	2260.58061	3178.74879
200	4.10E+03	5292.14412	4708.22251	6689.33107
199.5	4.85E+03	3644.72886	8866.24671	10204.6462
199	8.45E+03	7359.93067	13866.74666	14450.48828
198.5	9.33E+03	8810.58561	12109.72236	18298.37016
198	1.03E+04	16759.25741	15543.91228	15176.48235
197.5	1.42E+04	20339.83268	21416.45835	5668.75979
197	1.68E+04	27376.66233	14663.46699	-516.87698
196.5	22222.17778	28961.90381	11834.88318	-5871.98613

196	22604.40623	31137.41959	8494.41722	-8202.11312
195.5	16704.06293	32155.58444	3308.3025	-9465.05349
195	9728.82712	28193.9806	2210.3523	-11305.73609
194.5	4719.68803	17792.0208	38.85045	-5813.22534
194	-2383.85495	12386.49468	-2445.9954	416.84632
193.5	-7878.0122	2402.41309	1810.15898	2919.988
193	-15762.29044	-4619.75802	560.26531	3847.09529
192.5	-17736.0264	-9393.59397	-1656.81432	1114.42189
192	-15485.18481	-11189.21441	-743.11902	-2531.59351
191.5	-12576.20905	-11756.22438	-187.53258	-2375.58244
191	-9667.63324	-13343.33233	-1227.75722	-4695.0305
190.5	-8103.18968	-13517.84822	-5335.26647	-4537.29294
190	-9443.78895	-11968.0032	-5518.3215	-5031.51018
189.5	-3356.671	-8679.73203	-5458.47415	-2642.2891
189	532.91737	-6174.91584	-7344.26557	-2391.56084
188.5	1369.14975	-5711.0089	-7666.50002	-4104.40289
188	950.76492	-6834.11659	-7858.6808	-5854.20791
187.5	454.79985	-5334.3799	-7776.88898	-6155.72443
187	-283.15635	-1728.12719	-9633.17002	-9063.96027
186.5	530.23364	-1288.33783	-10352.16478	-9021.76449
186	773.67597	1711.60217	-5374.82252	-6039.15608
185.5	-5119.26807	-2204.63954	-3800.41996	-8623.40433
185	-5158.51082	-3986.40136	-5199.98667	-6434.94984
184.5	-5340.66593	-5497.60357	-6226.32403	-5644.68886
184	-1820.57128	-5574.56921	-6448.34183	-2838.88278
183.5	1516.12839	-7970.6696	-4615.15848	-2922.70773
183	-3387.54791	-11370.46295	-8789.05443	-3789.45439
182.5	-5258.3675	-11671.83282	-10191.9808	-6102.47642
182	-1602.19978	-7282.60507	-6157.23094	-2155.64444
181.5	-2053.65463	-6241.02256	-6396.86031	-3665.06016
181	-37.9628	-4849.92167	-3704.9695	-2360.05733
180.5	1941.54585	-2986.86798	-1306.68267	-1379.16208
180	1232.97004	-1973.28267	320.37063	-686.80465

APPENDIX 3 (Chapter 5- Project 2): ^{13}C - ^2H REDOR solid state NMR for the location of hairpin of HIV gp41 in membrane

Table Apx. 3.1: D₁₀Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	$\Delta S/S_0$	Stdev. ($\Delta S/S_0$)
177-174	3	14529949.66	2281891.167	10187318.62	1158670.205	0.3	0.13
157-154	3	2441891.67		-315982.6			
147-144	3	-1286515.73		-2012356.03			
117-114	3	-315169.12		-300769.2			
72- 69	3	-1148699.86		1191545.72			
48- 45	3	3765906.24		173347.3			
28-37	9	107422471	2634900.959	35644203.88	1158670.205	0.66	0.01
22-2	5	13386175.25	2083072.11	9346161.06	1057716.347	0.3	0.13
17-12	5	18426957.19	2281891.167	4922744.95	1158670.205	0.73	0.007
		Stdev, S ₀ (Noise)	2281891.167	Stdev, S ₁ (Noise)	1158670.205		

Table Apx. 3.2: D₁₀Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	($\Delta S/S_0$)	Stdev. ($\Delta S/S_0$)
177-172	5	14885709.91	331684.0036	9069132.24	1222865.475	0.39	0.08
147-144	3	1869799.29		1295438.21			
126-12	3	2480773.88		315655.99			
117-114	3	2693120.97		439163.87			
72-69	3	2493844.35		247389.41			
48- 45	3	2812578.53		-2268529.07			
37-28	9	188491552.4	491966.8811	77372560.69	1813802.616	0.59	0.009
27-22	5	12962527.94	363341.6215	7201400.44	1339582.01	0.44	0.1
17-12	5	10151271.38	419550.7659	3112196.76	1546816.069	0.69	0.0015
		Stdev, S ₀ (Noise)	363341.6215	Stdev, S ₁ (Noise)	1339582.01		

Table Apx. 3.3: D₁₀Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
177-172	5	8798400.9	6044248.938	10596113.63	1169933.05	-0.20	.83
157-154	3	1153023.2		1170725.01			
147-144	3	-2447690.8		-118484.45			
117-114	3	1955012.7		2316657.76			
72-69	3	5424714.4		-260488.72			
48-45	3	12357693.38		1378136.62			
37-28	9	230368376	7224259.252	96634375.25	1398337.452	.58	.0144
22-27	5	17875453	5108322.706	8491563.38	988773.8946	.52	.0014
17-14	5	20087808	5595887.155	6820949.86	1083147.533	.66	.001
		Stdev, S₀(Noise)	363341.6215	Stdev, S₁(Noise)	1339582.01		

Table Apx. 3.4: D₁₀Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
175-173	3	2991769.8	452915.322	2666687.91	505822.8189	0.10	.21
157-154	3	191787.77		567150.37			
147-144	3	765551.33		-6801.09			
117-114	3	939565		628306.53			
100-97	3	-390788.58		-593973.24			
83-80	3	-41113.66		-683700.28			
35-30	5	188531245.5	716122.003	157891701.3	799776.1001	0.16	0.005
23-28	5	24725658.75	452915.322	22379129	505822.8189	0.09	.002
17-12	5	6622932.91	452915.322	4553186.56	505822.8189	0.31	0.008
		Stdev, S₀(Noise)	554705.718	Stdev, S₁(Noise)	619503.9033		

Table Apx. 3.5: U-¹³CGlu-¹³CHM + D₁₀Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	-184856		937224.93			
147-144	3	4242814		3648816.13			
117-114	3	5870614		3531381.08			
98-95	3	-2476556		2196325.29			
83-80	3	-424562		-469512.66			
38-29	9	2.46E+08	5148511.5	181090308	2583845.37	0.26	0.02
26-22	4	23550276	3497724.8	16670458.31	1755377.26	0.29	0.12
17-13	4	25407693	4038824.71	14693886.55	2026935.07	0.42	0.12
		Stdev, S ₀ (Noise)	3497724.797	Stdev, S ₁ (Noise)	1755377.26		

Table Apx. 3.6: U-¹³CGlu-¹³CHM + D₁₀Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	501705.79		-430153.33			
147-144	3	-258888.79		-71421.51			
117-114	3	1024722.5		1490767.44			
98-95	3	3755751.95		2834452.94			
83-80	3	3044113.48		4193444.63			
35.5-30.5	5	173536928.6	2210249.18	139283295.3	2514696.375	0.20	0.01
24-28	4	13077884.38	1397884.32	12595786.25	1590433.633	0.04	0.02
16-13	3	11482218.19	1712051.65	11014390.13	1947875.436	0.04	0.22
		Stdev, S ₀ (Noise)	1712051.652	Stdev, S ₁ (Noise)	1947875.436		

Table Apx. 3.7: U-¹³CGlu-¹³CHM + D₁₀Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	-953151		-1276316.97			
147-144	3	519783.5		-393445.72			
117-114	3	-1155507		-711865.72			
98-95	3	-688362		-1146038.12			
83-80	3	-697088		-1112002.33			
35.50-31	4.5	2.54E+08	883825.277	214878452.3	495270.516	0.16	0.035
24-28	4	25419767	532966.695	25426838.25	298659.358	-0.002	0.024
16-13.5	2.5	11812115	595874.88	11539549.13	333911.314	0.023	0.005
		Stdev, S₀(Noise)	652748.2269	Stdev, S₁(Noise)	365781.517		

Table Apx. 3.8: U-¹³CGlu-¹³CHM + D₁₀Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	1207169.6		2384713.52			
147-144	3	-640339		-242538.45			
117-114	3	-516527.6		-419879.35			
98-95	3	96023.89		-605670.13			
83-80	3	91455.06		1157783.32			
36-31	5	239143824	1117384.877	228771503	1961352.73	0.04	0.009
27-24	3	37251165	731500.1116	36900481	1284006.765	.09	0.003
18-14	4	5379967	422331.7863	4756642.53	741321.6511	0.11	0.15
		Stdev, S₀(Noise)	731500.1116	Stdev, S₁(Noise)	1284006.765		

Table Apx. 3.9: 1,3-¹³CGly-¹³CHM + D₁₀Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
181-173	8	23493089.55	1728516.177	22673226.5	4526669.1	0.03	0.21
157-154	3	-340337.68		3814936.29			
147-144	3	1103642.54		2592775.41			
117-114	3	1003947.84		-1975643.13			
98-95	3	1871603.19		-2430693.59			
83-80	3	-650455.87		-400915.64			
58-53	5	9742787.59	1366512.023	5030207.6	3578646.14	0.48	0.38
37-32	5	31256363.25	1366512.023	21568297.4	3578646.14	0.31	0.11
26.5-21	5.5	87099802.88	1433209.901	63697748	3753315.74	0.27	0.04
19-15	4	99405651.38	1222245.51	78434203	3200838.41	0.21	0.003
		Stdev, S ₀ (Noise)	1058495.662	Stdev, S ₁ (Noise)	1284006.765		

Table Apx. 3.10: 1,3-¹³CGly-¹³CHM + D₁₀Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
179.5-173.5	6	37513080.1	1655802.22	37503002.9	1345914.15	0.0268632 97	0.05
157-154	3	1477799.02		2189819.73			
147-144	3	-397248.19		493747.51			
117-114	3	542905.3		-64331.63			
98-95	3	1282217.86		1526132.08			
83-80	3	-1308763.45		209697.08			
37-32	5	54170839.6	1511533.71	45595495.3	1228645.9	0.16	0.03
25.5-21	4.5	74781336	1433966.79	71541818	1165595.84	0.04	0.02
17.5-14	3.5	58575859	1264639.84	54201621	1027958.91	0.07	0.002
		Stdev, S ₀ (Noise)	1170829	Stdev, S ₁ (Noise)	951705.019		

Table Apx. 3.11: 1,3-¹³CGly-¹³CHM + D₁₀Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
179.5-172.5	7	73072968.5	1838393.447	68161770.1	1372489.4	0.07	0.003
157-154	3	-314051.56		921884.4			
147-144	3	-753693.45		862174.46			
117-114	3	1602169.8		258914.51			
98-95	3	27583.78		-357840.46			
83-80	3	1956516.79		2060971.7			
37-31	6	97980901.1	1702021.604	87762659.6	1270678.28	0.11	0.002
26-21	5	1.21E+08	1553726.043	1.12E+08	1159965.26	0.07	0.015
18-14.5	4.5	58399249	1473993.947	53147353	1100439.67	0.0008	0.002
		Stdev, S₀(Noise)	1203511.02	Stdev, S₁(Noise)	898505.226		

Table Apx. 3.12: 1,3-¹³CGly-¹³CHM + D₁₀Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
180-171	9	78637865.19	1642731.233	77749149.13	1891653.748	0.001	0.03
157-154	3	-881550.51		-917793.01			
147-144	3	-1673944.39		-1775753.31			
117-114	3	-1132875.82		-820203.44			
98-95	3	-3261084.7		-2711617.23			
83-80	3	-2204426.97		-3302298.35			
59-53	6	25943579.66	1341284.435	26159159.16	1544528.818	-0.08	0.07
35- 30	5	76332116	1224419.568	74546199.25	1409955.457	0.02	0.02
28- 22	6	76233385.63	1341284.435	75209261.13	1544528.818	0.01	0.02
19-15	4	30758978.25	1095154.155	30526538.25	1261102.499	0.008	0.005
		Stdev, S₀(Noise)	948431.3194	Stdev, S₁(Noise)	1092146.8		

Table Apx. 3.13: 2_13CGly_13CHM + D10Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
181-172	9	52589677	479578.4465	48191733	915326.234	0.08	0.02
157-154	3	116969.4		998883.6			
147-144	3	246586		-160564			
117-114	3	193849.2		984390.6			
98-95	3	-329442		612367.6			
83-80	3	-294890		70335.29			
57-53	4	3364203	319718.9643	4351647	610217.489	-0.29	0.21
37-33	4	51083855	319718.9643	32838070	610217.489	0.35	0.012
28-23	5	43276007	357456.669	36147689	682243.894	0.16	0.017
19-14	6	42791972	391574.1619	39660456	747360.741	0.073	0.019
		Stdev, S₀(Noise)	276884.7452	Stdev, S₁(Noise)	528463.8477		

Table Apx. 3.14: 2_13CGly_13CHM + D10Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
183-173	10	80556699.8	1232243.327	76938548.9	441237.956	0.04	0.015
157-154	3	-405045		-416731			
147-144	3	1134784		-188066			
117-114	3	-296264		208890.8			
98-95	3	818532.7		76291.69			
83-80	3	238632.1		-109017			
62-54	8	41843419	1102151.937	36358412	394655.226	0.13	0.02
37-31	6	1.95E+08	954491.5765	1.62E+08	341781.451	0.17	0.0044
27-24	3	45764347	674927.4663	44282274	241675.982	0.03	0.0152
17-14	3	29446351	674927.4663	26213799	241675.982	0.1	0.021
		Stdev, S₀(Noise)	674927.4663	Stdev, S₁(Noise)	241675.982		

Table Apx. 3.15: 2-¹³CGly-¹³CHM + D₁₀Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
178-172	6	102015828	829791.949	1.01E+08	717801.6735	0.014	0.01
157-154	3	-344856.17		676571.6			
147-144	3	646274.96		500209.7			
117-114	3	-649055.19		-600272			
98-95	3	80614.42		-119551			
83-80	3	666870.87		125650.4			
61-54	7	65978641.3	896277.742	61925059	775314.4198	0.06	0.017
36-32	4	185630259	677522.289	1.55E+08	586082.6122	0.16	0.0043
28-25	3	54136179	586751.514	49497187	507562.4309	0.09	0.013
17-13	4	31878304.1	677522.289	29702051	586082.6122	0.07	0.003
		Stdev, S₀(Noise)	586751.514	Stdev, S₁(Noise)	507562.4309		

Table Apx. 3.16: 2-¹³CGly-¹³CHM + D₁₀Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
171-180	9	78857792.06	363125.774	78246791.34	256495.142	0.0774813	0.005
157-154	3	-15873.41		69311.08			
147-144	3	-84594.27		-318055.29			
117-114	3	-364842.14		-8118.14			
98-95	3	30113.07		-21402.86			
83-80	3	210845.31		-96731.97			
62-54	8	82325142.63	342358.263	83033547.38	241825.939	-0.08605	0.001
36.5-32.5	4	116578103.8	242083.85	114047461.3	170996.761	0.021	0.0025
28.5-25.5	3	41792829.38	209650.8	41579220.75	148087.539	0.0511113	0.0061
13.5-17.5	4	4535753.93	242083.85	4075562.74	170996.761	0.1	0.006
		Stdev, S₀(Noise)	209650.8	Stdev, S₁(Noise)	148087.539		

Table Apx. 3.17: D₈Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
176-172.5	4.5	35378151.19	2937588.834	10714841	4029410.63	0.69	0.11
157-154	3	3151602.23		-2766939.2			
147-144	3	4551785		5015984.22			
117-114	3	2236011.51		1249461.69			
103-100	3	-1158517.72		1685865.34			
83-80	3	-377356.81		5295543.28			
36-32	4	181449216.1	2769585.313	10993518.1	3798964.774	0.93	0.02
26.5-23.5	3	31570988.81	2398531.239	12380229.7	3290000.002	0.61	0.1
16.5-13.5	3	32259163.94	2398531.239	15218709.1	3290000.002	0.53	0.11
		Stdev, S₀(Noise)	2398531.239	Stdev, S₁(Noise)	3290000		

Table Apx. 3.18: D₈Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
175.5-172.5	3	1E+07	1163101.565	5278948.17	1118077.413	0.62	0.09
157-154	3	-3E+05		-1344825.81			
147-144	3	383549		-527839.35			
117-114	3	2E+06		948455.83			
103-100	3	-5E+05		782528.83			
83-80	3	2E+06		-1361276.49			
36-32.5	4.5	1E+08	1256293.275	18415423.72	1207661.633	0.85	0.01
26.5-23.5	3	3E+07	1163101.565	23154564.5	1118077.413	0.33	0.04
16.5-13.5	3	3E+07	1163101.565	21454617.56	1118077.413	0.34	0.04
		Stdev, S₀(Noise)	1163102	Stdev, S₁(Noise)	1118077		

Table Apx. 3.19: D₈Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
175.5-173	2.5	8E+06	501205.2274	5193386.53	263980.3733	0.38	0.49
157-154	3	528054		-449940.26			
147-144	3	1E+06		-98842.44			
117-114	3	1E+06		51029.49			
103-100	3	-2E+05		353294.37			
83-80	3	913567		-26683.19			
32-36	4	1E+08	633980.0375	35805701.94	333911.6949	0.72	0.0028
26.5-23.5	3	3E+07	549042.818	29075502.69	289176.0104	0.16	0.015
16-14	2	2E+07	448291.5837	18575817.44	236111.2238	0.16	0.02
		Stdev, S₀(Noise)	549042.818	Stdev, S₁(Noise)	289176		

Table Apx. 3.20: D₈Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
176-173	3	4321152.61		4347087.02	483977.7216	0.006	0.11
157-154	3	-225901.94		2673.18			
147-144	3	45458.72		127186.4			
117-114	3	-42012.43		117881.79			
103-100	3	-39743.87		507328			
83-80	3	1553388.88		1183760.33			
37-32	5	160109814.3	943403.8153	114696481.9	624812.5519	0.28	0.005
28.5-25	3	30050792.75	789308.2612	29694214.5	522755.6862	0.011	0.032
17.5-12.5	5	8942947.31	667087.2352	9211235.69	441809.1924	-0.03	0.09
		Stdev, S₀(Noise)	730757.5	Stdev, S₁(Noise)	483977.7216		

Table Apx. 3.21: U-¹³CGlu-¹³CHM + D₈Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	-2171013		1212592.3			
147-144	3	-739448.8		-472911.4			
117-114	3	-140463.6		692575.17			
103-100	3	-638266.9		-827284			
83-80	3	1072050.5		1345498.6			
35.5-30.5	5	187494259	1509221.86	100124065	1275993.676	0.46	0.008
26-23	3	39801180	1169038.23	32138725	988380.4517	0.19	0.0034
16-13	3	32968802	1169038.23	30109475	988380.4517	0.08	0.004
		Stdev, S₀(Noise)	1169038.226	Stdev, S₁(Noise)	988380.4517		

Table Apx. 3.22: U-¹³CGlu-¹³CHM + D₈Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	-413918.94		1669592.46			
147-144	3	663011.29		939967.37			
117-114	3	739514.82		-1120479.23			
103-100	3	-1108966.44		563882.71			
83-80	3	-350151.46		1588093.96			
35-31	4	198268366.5	906629.577	104897327.3	1305768.98	0.47	0.007
25-23	2	48793984.75	641083.922	41419746.88	923318.099	0.15	0.02
16-14	2	37810064.5	641083.922	34817110.25	923318.099	0.08	0.03
		Stdev, S₀(Noise)	785164.2454	Stdev, S₁(Noise)	1130829.106		

Table Apx. 3.23: U-¹³CGlu-¹³CHM + D₈Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	1380804		189192.3			
147-144	3	-131553		-117490			
117-114	3	686699.7		542939.2			
103-100	3	1191638		307567.2			
83-80	3	-346824		-398678			
35-30.5	4.5	1.69E+08	946554.536	1.1E+08	451292.3757	0.35	0.004
26-23.5	3.5	35107110	772858.543	31259910	368478.6817	0.11	0.02
16-13.5	2.5	27273692	705520.096	26992089	336373.4766	0.01	0.03
		Stdev, S₀(Noise)	772858.5427	Stdev, S₁(Noise)	368478.682		

Table Apx. 3.24: U-¹³CGlu-¹³CHM + D₈Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
178-171	7	13499394.86	950865.654	14296447.72	873694.491	-0.05	0.09
157-154	3	-1165152.21		-1213353.06			
147-144	3	-843778.04		-991857.16			
117-114	3	-385628.06		-232388.01			
103-100	3	-399989.17		-573631.51			
83-80	3	486740.82		206618.8			
36-31.5	5.5	308797682	933731.536	272367634	700514.024	0.11	0.0035
26-24	2	35801616.25	508259.071	36008261.25	467009.349	-0.006	0.02
16 -14	2	13486396.88	508259.071	13434966.13	467009.349	0.004	0.05
		Stdev, S₀(Noise)	622487.6906	Stdev, S₁(Noise)	571967.3055		

Table Apx. 3.25: 1,3-¹³CGly-¹³CHM + D₈Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	5042329		-35381.92			
147-144	3	4593788.86		-1362283.4			
117-114	3	-984028.06		2479581.04			
103-100	3	-6394861.01		-1953206.05			
83-80	3	-3316826.8		4614571.29			
36- 31	5	118162140.9	6428041.654	3553885.296	3553885.3	0.97	0.03
26- 23.5	2.5	42111309.38	4545311.844	34066654.25	2512976.39	0.19	0.10
17-14.5	2.5	36232349.38	4545311.844	37489333.13	2512976.39	-0.03	0.15
		Stdev, S₀(Noise)	4979139.655	Stdev, S₁(Noise)	2752827.713		

Table Apx. 3.26: 1,3-¹³CGly-¹³CHM + D₈Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	8720659.53		6067986.72			
147-144	3	6520760.78		881523.36			
117-114	3	2979747.6		3266342.63			
103-100	3	2140015.49		2635641.01			
83-80	3	2659289.69		917469.56			
36-30	6	332948316	4068917.008	188282034	3011480.07	0.43	0.01
27-23	4	84918881.5	3322256.825	79040200.8	2458863.18	0.07	0.01
17-13	4	47851403.8	3322256.825	44038343.7	2458863.18	0.08	0.08
		Stdev, S₀(Noise)	2877158.809	Stdev, S₁(Noise)	2129437.978		

Table Apx. 3.27: 1,3-¹³CGly-¹³CHM + D₈Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
157-154	3	-4236124.36		- 1995452.1 8			
147-144	3	-4912148.73		- 2935503.2 2			
117-114	3	-3686967.09		- 4263417.5 5			
103-100	3	-11551925		- 9065719.9 1			
83-80	3	-9631673.03		- 6698321.5 9			
36-30	6	237491320.4	5021329.87	146425577 .6	4077133.61	0.38	0.02
27-23	4	44668551.47	4099898.67	43807055. 94	3328965.66	0.019	0.11
17-13	4	10410361.25	4099898.67	12691386. 72	3328965.66	-0.21	0.57
		Stdev, S₀(Noise)	3550616.4	Stdev, S₁(Noise)	2882968.826		

Table Apx. 3.28: 1,3-¹³CGly-¹³CHM + D₈Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
180-172	8	22205987.77	1744725.88	22737613.84	821920.7663	-0.02	
157-154	3	-2441898.24		-1308057.88			
147-144	3	-1840467.68		-1857969.41			
117-114	3	-171535.93		-1871485.71			
103-100	3	-2302690.59		-2713495.71			
83-80	3	-415869.31		-2010905.68			
36-30	6	269652429.1	1510976.93	222682135.6	711804.2635	0.17	0.0053
28-24	4	67490283.75	1233707.5	66917662.25	581185.7475	0.0084	0.002
18-13	5	12744230.38	1379326.92	14896713.52	649785.4194	-0.16	0.13
		Stdev, S₀(Noise)	1068422	Stdev, S₁(Noise)	503321.6216		

Table Apx. 3.29: 2-¹³CGly-¹³CHM + D₈Lipid_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
179-174	5	10705887	1450674.21	7148144.1	2419766.58	0.33	0.24
154-151	3	3610702.9		927396.62			
137-134	3	2823161.8		2993699.6			
120-117	3	2103804.3		-90661.45			
100-97	3	3621744.1		-1283119			
80-77	3	959263.02		2927554.6			
36-31	5	118764185	1450674.21	42725612	2419766.58	0.64	0.02
26-23	3	50603001	1123687.41	44078347	2419766.58	0.12	0.05
16-13	3	63561326	1123687.41	56597755	1874343.14	0.11	0.03
		Stdev, S₀(Noise)	1123687.408	Stdev, S₁(Noise)	1874343.137		

Table Apx. 3. 30: 2-¹³CGly-¹³CHM + D₈Lipid_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
179-174	5	26341253	1541632.565	21302603.68	614130.4044	0.19	0.05
157-154	3	-1384462		-26430.7			
147-144	3	176995.83		491923			
117-114	3	186298.72		184322.1			
100-103	3	1453163.1		-291924.2			
80-83	3	-1330801		937495.93			
35-31	4	117909590	1378878.085	42456316.03	549294.9325	0.64	0.006
26.5-22.5	4	62777098	1378878.085	58739862.25	549294.9325	0.06	0.02
16-13	3	49245485	1194143.45	44552208.13	475703.3657	0.10	0.02
		Stdev, S₀(Noise)	1194143	Stdev, S₁(Noise)	475703.3657		

Table Apx. 3. 31: 2-¹³CGly-¹³CHM + D₈Lipid_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
179.5-174.5	5	29541946	1546315.98	29004008	1059964.14	0.02	0.06
157-154	3	-140340.56		2054208.63			
147-144	3	-460205.13		836360.96			
117-114	3	-770693.64		1187129.34			
103-100	3	-3153098.86		526016.12			
83-80	3	-798392.63		2468959.4			
58-54	4	22971521.8	1383067.06	25497003.44	948060.744	-0.1	0.08
36-31	5	222838344	1546315.98	139623412.4	1059964.14	0.37	0.006
25-23	2	28289712	977976.095	26309987.63	670380.181	0.07	0.004
16.5-14.5	2	25440211	1197771.21	23600953.13	821044.689	0.07	0.05
		Stdev, S ₀ (Noise)	1197771	Stdev, S ₁ (Noise)	821044.6887		

Table Apx. 3. 32: 2-¹³CGly-¹³CHM + D₈Lipid_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
170-180	10	70520121	1605692.12	70500428.2	1272551.738	0.003	0.02
157-154	3	26099.86		141554.72			
147-144	3	-699842.7		-556452.57			
115-112	3	1182111.4		668954.73			
103-100	3	-1039158		-725541.67			
83-80	3	363076.98		814365.12			
62-51	11	111663221.4	1684064.103	105124175.3	1334663.523	0.06	0.02
38-31	7	169836409	1135395.787	141563440	899829.9635	0.17	0.008
28-23	5	42743397	879473.7946	42189562.5	697005.2926	0.01	0.02
17-13	4	11972889	879473.7946	10806649.3	697005.2926	0.10	0.09
		Stdev, S ₀ (Noise)	879473.8	Stdev, S ₁ (Noise)	697005.3		

Table Apx. 3.33: D₆Chol_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
177- 174	3	29655049.31	758686.7227	30451061.19	1233818.922	-0.02	0.04
157-154	3	94078.69		-457864.93			
147-144	3	-1305093.87		75705.84			
117-114	3	96523.34		-849051.53			
103-100	3	-202903.77		2034170.33			
83-80	3	-1432581.35		1413337.09			
37-33	4	145674794.3	876055.9671	125385224.4	1424691.374	0.14	0.01
26-22.5	3.5	42998564.13	819475.3202	30106671.31	1332676.75	0.3	0.03
17-14.5	2.5	34889854.5	692583.0535	33970784.75	1126317.426	0.03	0.03
		Stdev, S ₀ (Noise)	758686.7	Stdev, S ₁ (Noise)	1233819		

Table Apx. 3.34: D₆Chol_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
177-172	5	32887474.8	1471045.83	33828468.06	570075.539	-0.02	0.04
157-154	3	-232519.3		272986.33			
147-144	3	1138357.42		973550.84			
117-114	3	-641566.34		728447.4			
103-100	3	-1378487.48		806501.19			
83-80	3	1238908.26		-103635.67			
37-32	5	272705768.5	1471045.83	214540284.8	570075.539	0.21	0.002
26-22	4	102012185.6	1315743.39	46321984.28	509891.063	0.55	0.0076
17-14	3	68719353.69	1139467.2	40408516.91	441578.614	0.41	0.011
		Stdev, S ₀ (Noise)	1139467.197	Stdev, S ₁ (Noise)	1139467.197		

Table Apx. 3.35: D₆Chol_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
176-173	3	40792941.13	3378973.176	37590976	579700.6404	0.07	0.07
157-154	3	-8620844.41		-4664596.98			
147-144	3	-9125792.66		-6022913.97			
117-114	3	-7735100.56		-5665085.5			
103-100	3	-1310903.76		-5077361.28			
83-80	3	-3963670.52		-4800449.89			
33.5-36	2.5	455908283	3084566.382	416871805	946647.1817	0.09	0.006
27-23.5	3.5	135116754.8	3649708.163	116656139.5	626148.2555	0.14	0.02
17-13.5	3.5	105042708.1	3649708.163	94094602.25	626148.2555	0.11	0.03
		Stdev, S ₀ (Noise)	3378973.176	Stdev, S ₁ (Noise)	579700.6		

Table Apx. 3.36: D₆Chol_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
177-172	5	6E+06	1148638.077	6E+06	613596.6653	-0.012	0.22
157-154	3	-1E+05		50955			
147-144	3	-3046		177778			
117-114	3	487431		430911			
103-100	3	1E+06		633768			
83-80	3	2E+06		1E+06			
36-32	4	2E+08	1186308.305	2E+08	655962.4272	0.02	0.007
28-24	4	4E+07	1027373.129	4E+07	655962.4272	0.03	0.002
16.5-14	2.5	2E+07	812209.7733	1E+07	518583.8324	0.017	0.006
		Stdev, S ₀ (Noise)	889731.2	Stdev, S ₁ (Noise)	568080.1		

Table Apx. 3.37: U-¹³C₆Glu-¹³CHM + D₆Chol_40 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
186-181	5	33645201.9	1102708.008	13683200.64	1072005.098	0.59	0.03
178.5-172.5	6	9238781.96	1350535.977	9520012.63	665716.116	-0.03	
154-151	3	-638737.94		470732.38			
147-144	3	1279495.47		-734482.88			
117-114	3	831433.55		1662218.08			
96-93	3	771022.01		741897.18			
83-80	3	-842338.11		-269924.86			
56-53	3	1607852.34	954973.1477	858606.01	858606.01	0.47	0.92
35-30	5	184951033	1232865.032	183228868.8	236547452.4	0.009	0.01
29-20	9	124331018.1	1654062.012	62647641.91	1608007.647	0.50	0.14
18-15	3	40528001.41	954973.1477	33881676.32	928383.6481	0.16	0.035
		Stdev, S ₀ (Noise)	954973.1477	Stdev, S ₁ (Noise)	928383.6481		

Table Apx. 3.38: U-¹³C₆Glu-¹³CHM + D₆Chol_24 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
185-181	4	15662914.2	343129.4887	11439299.58	611192.6115	0.27	0.04
179-172	7	17978207.84	524138.9517	19122058.39	933612.1355	-0.06	0.06
153-150	3	378472.14		956904.62			
147-144	3	-133265.87		-483239.81			
117-114	3	-32615.55		57959.64			
104-101	3	186481.26		218641.52			
83-80	3	-526656.39		-549488.28			
59-56	3	3165689.88	343129.4887	1515071.82	611192.6115	0.52	0.74
36-30	6	129344514.3	485258.3766	112746746	864356.8805	0.13	0.11
27-20	7	66526708.06	524138.9517	54791352.75	933612.1355	0.18	0.0154
18-12	6	47308122.69	485258.3766	39611838.88	864356.8805	0.16	0.04
		Stdev, S ₀ (Noise)	343129.4887	Stdev, S ₁ (Noise)	611192.6115		

Table Apx. 3.39: U-¹³C Glu-¹³CHM + D₆Chol_16 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
186-182	4	14698023.19	292674.5564	13491746	192228.9641	0.08	0.024
178.5-172.5	6	42452542	506927.2018	43815825.88	332950.3326	-0.03	
157-154	3	659920.02		488739			
143-140	3	359840.56		-11481.62			
116-113	3	272995.27		383368.11			
103-100	3	-90766.74		115710.04			
83-80	3	-232653.91		-31284.18			
61- 56	5	8538701.77	462759.1057	3998356.12	303940.6795	0.53	0.06
36-30	6	158930749.8	506927.2018	135553823.6	332950.3326	0.15	0.045
27-20	7	91350259.88	547543.9579	78095479.25	359627.4618	0.15	0.06
18-12	6	70455771.94	506927.2018	62305976.56	332950.3326	0.12	0.05
		Stdev, S₀(Noise)	358451.6619	Stdev, S₁(Noise)	235431.438		

Table Apx. 3.40: U-¹³C Glu-¹³CHM + D₆Chol_3.2 ms

Spec. Range (ppm)	Width	Integrated S ₀	Stdev. S ₀ (Peak region)	Integrated S ₁	Stdev. S ₁ (Peak region)	(ΔS/S ₀)	Stdev. (ΔS/S ₀)
182-185	3	1384112.02	137331.4	1260068.16	140498.2904	0.09	0.13
179-171	8	18234092.85	274662.7	16000311.88	280996.5809	0.12	
152-149	3	159030.34		139755.22			
147-144	3	-232262.47		-256039.13			
117-114	3	-60943.32		15339.17			
103-100	3	387.94		62287.35			
83-80	3	-241663.81		-167791.03			
60-56	4	6806388.42	194215.9	5499612.03	198694.5878	0.19	0.0002
36-31	5	145745801.8	217139.9	131263414.3	222147.3026	0.10	0.0020
28-24	4	50516523	194215.9	44526232	198694.5878	0.12	0.003
19-15	4	23953032	194215.9	20618055.13	198694.5878	0.14	5.813E-07
		Stdev, S₀(Noise)	168195.8688	Stdev, S₁(Noise)	172074.561		

Table Apx. 3.41: ^{13}C chemical shifts of different lipids

Lipid Name	171-176 (ppm)	62-69 (ppm)	54-58 ppm (ppm)	32-36 (ppm)	22-26 (ppm)	14-16 (ppm)
DPPC	=CO	N-CH ₂ , OH-(CH ₂)	N-(CH ₃) ₃	-(CH ₂) ₁₂	-(CH ₂) ₂ -(CH ₃)	C-(CH ₃) ₂
DPPG	=CO	N-CH ₂ , OH-(CH ₂)	N-(CH ₃) ₃	-(CH ₂) ₁₂	-(CH ₂) ₂ -(CH ₃)	C-(CH ₃) ₂
Cholesterol	=CO	-	C ₁₄ , C ₁₇	C ₇ , C ₈ , C ₁₀ , C ₁₂ , C ₂₀	C _{21/27} -(CH ₃)	C _{18/19/26} -(CH ₃)

Table 3.42: Calculation of dephasing and error only for ^{13}CHM (no lipid contribution)

U- ^{13}C Glu- $^{13}\text{CHM}+\text{D}_{10}$							
30-38 ppm peak				22-28 ppm peak		12-18 ppm peak	
At 3.2 ms				At 3.2 ms		At 3.2 ms	
Cal. of Dephasing		Cal. of Error		Cal. of Dephasing		Cal. of Dephasing	
S_0^{Lipid}	0.2671	$\gamma^{\text{Lipid}}(\varphi)$	0.837482937	S_0^{Lipid}	0.1	S_0^{Lipid}	0.35
S_0^{Protein}	0.7329	$\gamma^{\text{Total}}(\varphi)$	0.956627268	S_0^{Protein}	0.9	S_0^{Protein}	0.65
S_0^{Total}	1	$\sigma_r^{\text{Lipid}}(\varphi)$	0.005302383	S_0^{Total}	1	S_0^{Total}	1
γ^{Lipid}	0.8375	$\sigma_r^{\text{Total}}(\varphi)$	0.00934048	γ^{Lipid}	0.9051	γ^{Lipid}	0.91
$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.9567	$\sigma_r^{\text{Total}}(\varphi) - \gamma^{\text{Lipid}}(\varphi)$	0.010740569	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.9906	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.89
γ^{Protein}	1.00014156	$\sigma_1^{-\gamma^{\text{Lipid}}}(\varphi)$	0.005302383	γ^{Protein}	1.0001	γ^{Protein}	0.87923077
Dep. ($\Delta S/S_0$)	-0.0001416	$\sigma_{S_0}^{\text{Protein}}(\varphi)$	0.070284185	Dep. ($\Delta S/S_0$)	-1E-04	Dep. ($\Delta S/S_0$)	0.12076923
		$\gamma^{\text{Lipid}}(\varphi)$	0.837482937	At 16 ms		At 16 ms	
		$S_0^{\text{Lipid}}(\varphi)$	0.73	Cal. of Dephasing		Cal. of Dephasing	
		$\gamma^{\text{Lipid}}(\varphi) \times S_0^{\text{Lipid}}(\varphi)^{\square}$	0.611362544	S_0^{Lipid}	0.1	S_0^{Lipid}	0.35
		$\sigma^{\text{Lipid}}(\varphi) \times S_0^{\text{Lipid}}(\varphi)$	0.058988938	S_0^{Protein}	0.9	S_0^{Protein}	0.65
		$\gamma^{\text{Total}}(\varphi) - (\gamma^{\text{Lipid}}(\varphi) \times S_0^{\text{Lipid}}(\varphi))^{\square}$	0.73	S_0^{Total}	1	S_0^{Total}	1
		$\gamma^{\text{Protein}}(\varphi)$	0.345264724	γ^{Lipid}	0.4751	γ^{Lipid}	0.34
		$\sigma_r^{\text{Total}}(\varphi) - (\gamma^{\text{Lipid}}(\varphi) \times S_0^{\text{Lipid}}(\varphi))$	0.472965375	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	1.02	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.977
		$\sigma_r^{\text{Protein}}(\varphi)$	0.059723859	γ^{Protein}	1.08054444	γ^{Protein}	1.32
				Dep. ($\Delta S/S_0$)	-0.0805444	Dep. ($\Delta S/S_0$)	-0.32
At 16 ms				At 24 ms		At 24 ms	
Cal. of Dephasing		Cal. of Error		Cal. of Dephasing		Cal. of Dephasing	
S_0^{Lipid}	0.2671	$\gamma^{\text{Lipid}}(\varphi)$	0.419477608	S_0^{Lipid}	0.1	S_0^{Lipid}	0.288
S_0^{Protein}	0.7329	$\gamma^{\text{Total}}(\varphi)$	0.844409548	S_0^{Protein}	0.9	S_0^{Protein}	0.65
S_0^{Total}	1	$\sigma_r^{\text{Lipid}}(\varphi)$	0.014487572	S_0^{Total}	1	S_0^{Total}	1
γ^{Lipid}	0.4195	$\sigma_r^{\text{Total}}(\varphi)$	0.003519826	γ^{Lipid}	0.556	γ^{Lipid}	0.31
$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.8445	$\sigma_r^{\text{Total}}(\varphi) - \gamma^{\text{Lipid}}(\varphi)$	0.014909022	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.96	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.96
γ^{Protein}	0.99938812	$\sigma_1^{-\gamma^{\text{Lipid}}}(\varphi)$	0.014487572	γ^{Protein}	1.00488889	γ^{Protein}	1.31
Dep. ($\Delta S/S_0$)	0.00061188	$\sigma_{S_0}^{\text{Protein}}(\varphi)$	0.031516147	Dep. ($\Delta S/S_0$)	-0.0048889	Dep. ($\Delta S/S_0$)	-0.31
		$\gamma^{\text{Lipid}}(\varphi)$	0.419477608	At 40 ms		At 40 ms	
		$S_0^{\text{Lipid}}(\varphi)$	0.731981997	Cal. of Dephasing		Cal. of Dephasing	

		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.307050057	S_0^{Lipid}	0.1	S_0^{Lipid}	0.35
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.016948016	$S_0^{Protein}$	0.9	$S_0^{Protein}$	0.65
		$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.537359491	S_0^{Total}	1	S_0^{Total}	1
		$\gamma^{Protein}(\tau)$	0.734115719	γ^{Lipid}	0.7	γ^{Lipid}	0.27
		$\sigma^{\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))}$	0.017309662	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.71	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.58
		$\sigma^{\gamma^{Protein}(\tau)}$	0.039475037	$\gamma^{Protein}$	0.711111111	$\gamma^{Protein}$	0.74692308
				Dep. ($\Delta S/S_0$)	-0.0048889	Dep. ($\Delta S/S_0$)	0.25
Cal. of Dephasing		Cal. of Error					
S_0^{Lipid}	0.2671	$\gamma^{Lipid}(\tau)$	3.13011E-09				
$S_0^{Protein}$	0.7329	$\gamma^{Total}(\tau)$	0.802614731				
S_0^{Total}	1	$\sigma_{\tau}^{Lipid}(\tau)$	6.91595E-11				
γ^{Lipid}	0.41	$\sigma_{\tau}^{Total}(\tau)$	0.017733689				
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.8	$\sigma^{\gamma^{Total}(\tau) - \gamma^{Lipid}(\tau)}$	0.017733689				
$\gamma^{Protein}$	0.94213262	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	6.91595E-11				
Dep. ($\Delta S/S_0$)	0.05786738	$\sigma_{S_0}^{Protein}(\tau)$	0.017733689				
		$\gamma^{Lipid}(\tau)$	3.13011E-09				
		$S_0^{Lipid}(\tau)$	0.80261473				
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	2.51228E-09				
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	7.85008E-11				
		$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.802614728				
		$\gamma^{Protein}(\tau)$	0.999999998				
		$\sigma^{\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))}$	0.017733689				
		$\sigma^{\gamma^{Protein}(\tau)}$	0.031246901				
At 40 ms							
Cal. of Dephasing		Cal. of Error					
S_0^{Lipid}	0.2671	$\gamma^{Lipid}(\tau)$	9.30904E-11				
$S_0^{Protein}$	0.7329	$\gamma^{Total}(\tau)$	0.736969616				
S_0^{Total}	1	$\sigma_{\tau}^{Lipid}(\tau)$	2.28336E-12				
γ^{Lipid}	0.33	$\sigma_{\tau}^{Total}(\tau)$	0.018681725				
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.737	$\sigma^{\gamma^{Total}(\tau) - \gamma^{Lipid}(\tau)}$	0.018681725				
$\gamma^{Protein}$	0.88532815	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	2.28336E-12				
Dep. ($\Delta S/S_0$)	0.11467185	$\sigma_{S_0}^{Protein}(\tau)$	0.018681725				
		$\gamma^{Lipid}(\tau)$	9.30904E-11				
		$S_0^{Lipid}(\tau)$	0.736969616				
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	6.86048E-11				
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	2.41994E-12				
		$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.736969616				
		$\gamma^{Protein}(\tau)$	1				
		$\sigma^{\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))}$	0.018681725				
		$\sigma^{\gamma^{Protein}(\tau)}$	0.035849441				

1,3- ¹³ CGly- ¹³ CHM+D ₁₀											
30-38 ppm Peak				22--28 ppm Peak		12-18 ppm Peak				172-178 ppm peak	
At 3.2 ms				At 3.2 ms		At 3.2 ms				At 3.2 ms	
						Cal. of Dephasing		Cal. of Error			
Cal. of Dephasing		Cal. of Error		Cal. of Dephasing	Cal. of Error	S_0^{Lipid}	0.02	$\gamma^{Lipid}(\tau)$	0.687487949	Cal. of Dephasing	
S_0^{Lipid}	0.1 2	$\gamma^{Lipid}(\tau)$	0.83748 2937	S_0^{Lipid}	0.135	$S_0^{Protein}$	0.98	$\gamma^{Total}(\tau)$	0.992443182	S_0^{Lipid}	0.1
$S_0^{Protein}$	0.8 8	$\gamma^{Total}(\tau)$	0.97660 3338	$S_0^{Protein}$	0.865	S_0^{Total}	1	$\sigma^{Lipid}(\tau)$	0.089685106	$S_0^{Protein}$	0.9
S_0^{Total}	1	$\sigma^{Lipid}(\tau)$	0.00530 2383	S_0^{Total}	1	γ^{Lipid}	0.91	$\sigma^{Total}(\tau)$	0.054125254	S_0^{Total}	1
γ^{Lipid}	0.8 37 5	$\sigma^{Total}(\tau)$	0.02421 9709	γ^{Lipid}	0.9051	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.992	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.104751903	γ^{Lipid}	0.9
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9 76 7	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.02479 3337	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9866	$\gamma^{Protein}$	0.99367 347	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.089685106	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.993
$\gamma^{Protein}$	0.9 95 68 18 2	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.00530 2383	$\gamma^{Protein}$	0.99931 965	Dep. (ΔS/S ₀)	0.00632 653	$\sigma^{S_0^{Protein}}(\tau)$	0.436781264	$\gamma^{Protein}$	1.00333333
Dep. (ΔS/S ₀)	0.0 04 31 81 8	$\sigma^{S_0^{Protein}}(\tau)$	0.15509 3888	Dep. (ΔS/S ₀)	0.00068 035			$\gamma^{Lipid}(\tau)$	0.687487949	Dep. (ΔS/S ₀)	-0.0033333
		$\gamma^{Lipid}(\tau)$	0.83748 2937	At 16 ms				$S_0^{Lipid}(\tau)$	0.975819115	At 16 ms	
		$S_0^{Lipid}(\tau)$	0.85603 5655	Cal. of Dephasing				$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.670863882	Cal. of Dephasing	
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.71691 5255	S_0^{Lipid}	0.135			$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.31277519	S_0^{Lipid}	0.1
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.12996 7771	$S_0^{Protein}$	0.865			$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.3215793	$S_0^{Protein}$	0.9
		$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.25968 8082	S_0^{Total}	1			$\gamma^{Protein}(\tau)$	0.329548064	S_0^{Total}	1
		$\gamma^{Protein}(\tau)$	0.30336 1292	γ^{Lipid}	0.4751			$\sigma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))$	0.317423791	γ^{Lipid}	1.2
		$\sigma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))$	0.13220 5203	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.93			$\sigma^{Protein}(\tau)$	0.357171818	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.986
		$\sigma^{\gamma^{Protein}(\tau)}$	0.16392 7426	$\gamma^{Protein}$	1.00099 595					$\gamma^{Protein}$	0.96222222
				Dep. (ΔS/S ₀)	- 0.00099 6					Dep. (ΔS/S ₀)	0.03777778
At 16 ms						At 16 ms					
Cal. of Dephasing		Cal. of Error		At 24 ms		Cal. of Dephasing		Cal. of Error		24 ms	
S_0^{Lipid}	0.1 2	$\gamma^{Lipid}(\tau)$	0.41947 7608	Cal. of Dephasing		S_0^{Lipid}	0.02	$\gamma^{Lipid}(\tau)$	0.339556705	Cal. of Dephasing	
$S_0^{Protein}$	0.8 8	$\gamma^{Total}(\tau)$	0.89571 1905	S_0^{Lipid}	0.135	$S_0^{Protein}$	0.98	$\gamma^{Total}(\tau)$	0.910069107	S_0^{Lipid}	0.1
S_0^{Total}	1	$\sigma^{Lipid}(\tau)$	0.01448 7572	$S_0^{Protein}$	0.865	S_0^{Total}	1	$\sigma^{Lipid}(\tau)$	0.1089	$S_0^{Protein}$	0.9
γ^{Lipid}	0.4 19 5	$\sigma^{Total}(\tau)$	0.02025 5355	S_0^{Total}	1	γ^{Lipid}	0.34	$\sigma^{Total}(\tau)$	0.09	S_0^{Total}	1
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.8 98	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.02490 3195	γ^{Lipid}	0.556	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.91	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.141277068	γ^{Lipid}	0.7
$\gamma^{Protein}$	0.9 63 25	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.01448 7572	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.957	$\gamma^{Protein}$	0.92163 265	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.1089	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9164
Dep. (ΔS/S ₀)	0.0 36 75	$\sigma^{S_0^{Protein}}(\tau)$	0.04753 281	$\gamma^{Protein}$	1.01958 382	Dep. (ΔS/S ₀)	0.07836 735	$\sigma^{S_0^{Protein}}(\tau)$	0.256995653	$\gamma^{Protein}$	0.94044444
		$\gamma^{Lipid}(\tau)$	0.41947 7608	Dep. (ΔS/S ₀)	0.01958 38			$\gamma^{Lipid}(\tau)$	0.339556705	Dep. (ΔS/S ₀)	0.05955556
		$S_0^{Lipid}(\tau)$	0.82035 4742					$S_0^{Lipid}(\tau)$	0.86383253		
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.34412 0445					$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.293320128		
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.02321 2361					$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.128314189		

		$\gamma^{Total}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))^{\square}$	0.55159 146					$\gamma^{Total}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))^{\square}$	0.61674898		
		$\gamma^{Protein}(\vartheta)$	0.67238 1632					$\gamma^{Protein}(\vartheta)$	0.713968227		
		$\sigma^{\gamma^{Total}}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))$	0.03080 7355					$\sigma^{\gamma^{Total}}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))$	0.15673076		
		$\sigma^{\gamma^{Protein}}(\vartheta)$	0.05411 1762					$\sigma^{\gamma^{Protein}}(\vartheta)$	0.279351475		
At 24 ms						At 24 ms					
						Cal. of Dephasing		Cal. of Error			
Cal. of Dephasing		Cal. of Error		At 40 ms		S_0^{Lipid}	0.02	$\gamma^{Lipid}(\vartheta)$	0.837482937	At 40 ms	
S_0^{Lipid}	0.1 2	$\gamma^{Lipid}(\vartheta)$	3.13011 E-09	Cal. of Dephasing		$S_0^{Protein}$	0.98	$\gamma^{Total}(\vartheta)$	0.976603338	Cal. of Dephasing	
$S_0^{Protein}$	0.8 8	$\gamma^{Total}(\vartheta)$	0.84169 8145	S_0^{Lipid}	0.135	S_0^{Total}	1	$\sigma^{\gamma^{Lipid}}(\vartheta)$	0.15	S_0^{Lipid}	0.1
S_0^{Total}	1	$\sigma^{\gamma^{Lipid}}(\vartheta)$	4.84414 E-11	$S_0^{Protein}$	0.865	γ^{Lipid}	0.31	$\sigma^{\gamma^{Total}}(\vartheta)$	0.03	$S_0^{Protein}$	0.9
γ^{Lipid}	0.4 1	$\sigma^{\gamma^{Total}}(\vartheta)$	0.03264 9907	S_0^{Total}	1	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.92	$\sigma^{\gamma^{Total}}(\vartheta) - \gamma^{Lipid}(\vartheta)$	0.152970585	S_0^{Total}	1
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.8 42	$\sigma^{\gamma^{Total}}(\vartheta) - \gamma^{Lipid}(\vartheta)$	0.03264 9907	γ^{Lipid}	0.7	$\gamma^{Protein}$	0.93244 898	$\sigma^{1-\gamma^{Lipid}}(\vartheta)$	0.15	γ^{Lipid}	0.7
$\gamma^{Protein}$	0.9 00 90 90 9	$\sigma^{1-\gamma^{Lipid}}(\vartheta)$	4.84414 E-11	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.74	Dep. (ΔS/S ₀)	0.06755 102	$\sigma^{S_0^{Protein}}(\vartheta)$	1.228914883	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9164
Dep. (ΔS/S ₀)	0.0 99 09 09 1	$\sigma^{S_0^{Protein}}(\vartheta)$	0.03264 9907	$\gamma^{Protein}$	0.74624 277			$\gamma^{Lipid}(\vartheta)$	0.837482937	$\gamma^{Protein}$	0.94044444
		$\gamma^{Lipid}(\vartheta)$	3.13011 E-09	Dep. (ΔS/S ₀)	0.25375 723			$S_0^{Lipid}(\vartheta)$	0.856035655	Dep. (ΔS/S ₀)	0.05955556
		$S_0^{Lipid}(\vartheta)$	0.84169 8145					$\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta)^{\square}$	0.716915255		
		$\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta)^{\square}$	2.63461 E-09					$\sigma^{\gamma^{Lipid}}(\vartheta) \times S_0^{Lipid}(\vartheta)$	1.037174425		
		$\sigma^{\gamma^{Lipid}}(\vartheta) \times S_0^{Lipid}(\vartheta)$	1.10031 E-10					$\gamma^{Total}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))^{\square}$	0.259688082		
		$\gamma^{Total}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))^{\square}$	0.84169 8143					$\gamma^{Protein}(\vartheta)$	0.303361292		
		$\gamma^{Protein}(\vartheta)$	0.99999 9997					$\sigma^{\gamma^{Total}}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))$	1.037608206		
		$\sigma^{\gamma^{Total}}(\vartheta) - (\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta))$	0.03264 9907					$\sigma^{\gamma^{Protein}}(\vartheta)$	1.287970997		
		$\sigma^{\gamma^{Protein}}(\vartheta)$	0.05485 8077								
At 40 ms						At 40 ms					
Cal. of Dephasing		Cal. of Error				Cal. of Dephasing		Cal. of Error			
S_0^{Lipid}	0.1 2	$\gamma^{Lipid}(\vartheta)$	9.30904 E-11			S_0^{Lipid}	0.02	$\gamma^{Lipid}(\vartheta)$	0.837482937		
$S_0^{Protein}$	0.8 8	$\gamma^{Total}(\vartheta)$	0.69004 5006			$S_0^{Protein}$	0.98	$\gamma^{Total}(\vartheta)$	0.976603338		
S_0^{Total}	1	$\sigma^{\gamma^{Lipid}}(\vartheta)$	2.28336 E-12			S_0^{Total}	1	$\sigma^{\gamma^{Lipid}}(\vartheta)$	0.07		
γ^{Lipid}	0.3 3	$\sigma^{\gamma^{Total}}(\vartheta)$	0.011			γ^{Lipid}	0.27	$\sigma^{\gamma^{Total}}(\vartheta)$	0.034		
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.6 9	$\sigma^{\gamma^{Total}}(\vartheta) - \gamma^{Lipid}(\vartheta)$	0.011			$\frac{S_0^{Protein}}{S_0^{Total}}$	0.79	$\sigma^{\gamma^{Total}}(\vartheta) - \gamma^{Lipid}(\vartheta)$	0.077820306		
$\gamma^{Protein}$	0.7 39 09 09 1	$\sigma^{1-\gamma^{Lipid}}(\vartheta)$	2.28336 E-12			$\gamma^{Protein}$	0.80061 224	$\sigma^{1-\gamma^{Lipid}}(\vartheta)$	0.07		
Dep. (ΔS/S ₀)	0.2 60 90 90 9	$\sigma^{S_0^{Protein}}(\vartheta)$	0.011			Dep. (ΔS/S ₀)	0.19938 776	$\sigma^{S_0^{Protein}}(\vartheta)$	0.60435281		
		$\gamma^{Lipid}(\vartheta)$	9.30904 E-11					$\gamma^{Lipid}(\vartheta)$	0.837482937		
		$S_0^{Lipid}(\vartheta)$	0.69004 5006					$S_0^{Lipid}(\vartheta)$	0.856035655		
		$\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta)^{\square}$	6.42366 E-11					$\gamma^{Lipid}(\vartheta) \times S_0^{Lipid}(\vartheta)^{\square}$	0.716915255		
		$\sigma^{\gamma^{Lipid}}(\vartheta) \times S_0^{Lipid}(\vartheta)$	1.87913 E-12					$\sigma^{\gamma^{Lipid}}(\vartheta) \times S_0^{Lipid}(\vartheta)$	0.509670004		

		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.69004 5006					$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.259688082		
		$\gamma^{Protein}(\varphi)$	1					$\gamma^{Protein}(\varphi)$	0.303361292		
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.011					$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.510802812		
		$\sigma^{Protein}(\varphi)$	0.02254 3963					$\sigma^{Protein}(\varphi)$	0.633978358		

2- ¹³ CGly- ¹³ CHM+D ₁₀											
30-38 ppm				22-28 ppm peak				12-18 ppm peak		172-178 ppm peak	
						$\gamma^{Lipid}(\varphi)$	0.905097382				
		$\gamma^{Lipid}(\varphi)$	0.84	At 3.2 ms $\sigma_f^{Lipid}(\tau)$		$\gamma^{Total}(\varphi)$	0.835282426				
At 3.2 ms		$\gamma^{Total}(\varphi)$	0.98			$\sigma_f^{Lipid}(\tau)$	0.023	At 3.2 ms		At 3.2 ms	
S_0^{Lipid}	0.13	$\sigma_f^{Lipid}(\tau)$	0.005	S_0^{Lipid}	0.05	$\sigma_f^{Total}(\tau)$	0.017	S_0^{Lipid}	0.31	S_0^{Lipid}	0.09
$S_0^{Protein}$	0.87	$\sigma_f^{Total}(\tau)$	0.003	$S_0^{Protein}$	0.95	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.028600699	$S_0^{Protein}$	0.69	$S_0^{Protein}$	0.91
S_0^{Total}	1	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.006	S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.023	S_0^{Total}	1	S_0^{Total}	1
γ^{Lipid}	0.84	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.005	γ^{Lipid}	0.91	$\sigma_{S_0}^{Protein}(\varphi)$	-0.350156413	γ^{Lipid}	0.91	γ^{Lipid}	0.9
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.98	$\sigma_{S_0}^{Protein}(\varphi)$	0.046	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.99	$\gamma^{Lipid}(\varphi)$	0.905097382	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.899	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9887
$\gamma^{Protein}$	0.99	$\gamma^{Lipid}(\varphi)$	0.84	$\gamma^{Protein}$	0.99	$S_0^{Lipid}(\tau)$	-0.735648361	$\gamma^{Protein}$	0.8940579 7	$\gamma^{Protein}$	0.997472527
Dep. (ΔS/S ₀)	0.007	$S_0^{Lipid}(\tau)$	0.87	Dep. (ΔS/S ₀)	0.00 03	$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	-0.665833406	Dep. (ΔS/S ₀)	0.1059420 3	Dep. (ΔS/S ₀)	0.002527473
		$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	0.723			$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	-0.317376988				
		$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	0.039			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	1.501115832				
		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.253			$\gamma^{Protein}(\varphi)$	-2.040534461				
		$\gamma^{Protein}(\varphi)$	0.292			$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.317831957				
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.039			$\sigma^{Protein}(\varphi)$	-1.063018565				
		$\sigma^{Protein}(\varphi)$	0.047								
						$\gamma^{Lipid}(\varphi)$	0.475040446				
At 16 ms		$\gamma^{Lipid}(\tau)$	0.4194 77608	At 16 ms		$\gamma^{Total}(\tau)$	0.91430883	At 16 ms		At 16 ms	
S_0^{Lipid}	0.13	$\gamma^{Total}(\tau)$	0.8350 69463	S_0^{Lipid}	0.05	$\sigma_f^{Lipid}(\tau)$	0.14	S_0^{Lipid}	0.31	S_0^{Lipid}	0.09
$S_0^{Protein}$	0.87	$\sigma_f^{Lipid}(\tau)$	0.0144 87572	$S_0^{Protein}$	0.95	$\sigma_f^{Total}(\tau)$	0.014	$S_0^{Protein}$	0.69	$S_0^{Protein}$	0.91
S_0^{Total}	1	$\sigma_f^{Total}(\tau)$	0.0044	S_0^{Total}	1	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.140698259	S_0^{Total}	1	S_0^{Total}	1
γ^{Lipid}	0.419 5	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.0151 40996	γ^{Lipid}	0.47 51	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.14	γ^{Lipid}	0.34	γ^{Lipid}	1.2
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.84	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.0144 87572	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.91	$\sigma_{S_0}^{Protein}(\varphi)$	0.348756891	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.93	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9328
$\gamma^{Protein}$	0.902 8333 3	$\sigma_{S_0}^{Protein}(\varphi)$	0.0316 13981	$\gamma^{Protein}$	0.93 2889 474	$\gamma^{Lipid}(\varphi)$	0.475040446	$\gamma^{Protein}$	1.1950724 6	$\gamma^{Protein}$	0.906373626
Dep. (ΔS/S ₀)	0.097 1666 7	$\gamma^{Lipid}(\tau)$	0.4194 77608	Dep. (ΔS/S ₀)	0.06 7110 526	$S_0^{Lipid}(\tau)$	0.836766149	Dep. (ΔS/S ₀)	- 0.1950725	Dep. (ΔS/S ₀)	0.093626374
		$S_0^{Lipid}(\tau)$	0.7158 92893			$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	0.397497765				

		$\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau)^{\square}$	0.3003 01039			$\sigma^{lipid}(\tau \times S_0^{lipid}(\tau))$	0.202906954				
		$\sigma^{lipid}(\tau \times S_0^{lipid}(\tau))$	0.0168 35458			$\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))^{\square}$	0.516811066				
		$\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))^{\square}$	0.5347 68424			$\gamma^{protein}(\tau)$	0.617629031				
		$\gamma^{protein}(\tau)$	0.7469 95017			$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.203389361				
		$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.0174 00938			$\sigma^{\gamma^{protein}(\tau)}$	0.354044302				
		$\sigma^{\gamma^{protein}(\tau)}$	0.0409 7541								
				At 24 ms		$\gamma^{lipid}(\tau)$	3.3944E-08	At 24 ms		At 24 ms	
At 24 ms		$\gamma^{lipid}(\tau)$	3.1301 1E-09	S_0^{lipid}	0.05	$\gamma^{total}(\tau)$	0.91	S_0^{lipid}	0.31	S_0^{lipid}	0.09
S_0^{lipid}	0.13	$\gamma^{total}(\tau)$	0.8274 10168	$S_0^{protein}$	0.95	$\sigma_f^{lipid}(\tau)$	0.1	$S_0^{protein}$	0.69	$S_0^{protein}$	0.91
$S_0^{protein}$	0.87	$\sigma_f^{lipid}(\tau)$	6.9159 5E-11	S_0^{total}	1	$\sigma_f^{total}(\tau)$	0.013	S_0^{total}	1	S_0^{total}	1
S_0^{total}	1	$\sigma_f^{total}(\tau)$	0.0044	γ^{lipid}	0.55 6	$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.10084146	γ^{lipid}	0.31	γ^{lipid}	0.61
γ^{lipid}	0.41	$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.0044	$\frac{S_0^{protein}}{S_0^{total}}$	0.96 77	$\sigma^{1-\gamma^{lipid}(\tau)}$	0.1	$\frac{S_0^{protein}}{S_0^{total}}$	0.89	$\frac{S_0^{protein}}{S_0^{total}}$	0.998
$\frac{S_0^{protein}}{S_0^{total}}$	0.83	$\sigma^{1-\gamma^{lipid}(\tau)}$	6.9159 5E-11	$\gamma^{protein}$	0.98 9368 421	$\sigma_{S_0^{protein}(\tau)}$	0.135830781	$\gamma^{protein}$	1.1505797 1	$\gamma^{protein}$	1.036373626
$\gamma^{protein}$	0.892 7586 2	$\sigma_{S_0^{protein}(\tau)}$	0.0044	Dep. ($\Delta S/S_0$)	0.01 0631 579	$\gamma^{lipid}(\tau)$	3.3944E-08	Dep. ($\Delta S/S_0$)	- 0.1505797	Dep. ($\Delta S/S_0$)	- 0.036373626
Dep. ($\Delta S/S_0$)	0.107 2413 8	$\gamma^{lipid}(\tau)$	3.1301 1E-09			$S_0^{lipid}(\tau)$	0.909999997				
		$S_0^{lipid}(\tau)$	0.8274 10167			$\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau)^{\square}$	3.0889E-08				
		$\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau)^{\square}$	2.5898 9E-09			$\sigma^{lipid}(\tau \times S_0^{lipid}(\tau))$	0.091				
		$\sigma^{lipid}(\tau \times S_0^{lipid}(\tau))$	5.8857 4E-11			$\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))^{\square}$	0.909999969				
		$\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))^{\square}$	0.8274 10165			$\gamma^{protein}(\tau)$	0.999999969				
		$\gamma^{protein}(\tau)$	0.9999 99998			$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.091923881				
		$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.0044			$\sigma^{\gamma^{protein}(\tau)}$	0.180233182				
		$\sigma^{\gamma^{protein}(\tau)}$	0.0075 20502								
						$\gamma^{lipid}(\tau)$	0.27	At 40 ms		At 40 ms	
At 40 ms		$\gamma^{lipid}(\tau)$	9.3090 4E-11	At 40 ms		$\gamma^{total}(\tau)$	0.84	S_0^{lipid}	0.31	S_0^{lipid}	0.09
S_0^{lipid}	0.13	$\gamma^{total}(\tau)$	0.6428 26783	S_0^{lipid}	0.05	$\sigma_f^{lipid}(\tau)$	0.13	$S_0^{protein}$	0.69	$S_0^{protein}$	0.91
$S_0^{protein}$	0.87	$\sigma_f^{lipid}(\tau)$	2.2833 6E-12	$S_0^{protein}$	0.95	$\sigma_f^{total}(\tau)$	0.017	S_0^{total}	1	S_0^{total}	1
S_0^{total}	1	$\sigma_f^{total}(\tau)$	0.013	S_0^{total}	1	$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.131106827	γ^{lipid}	0.27	γ^{lipid}	0.7
γ^{lipid}	0.33	$\sigma^{\gamma^{total}(\tau) - (\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau))}$	0.013	γ^{lipid}	0.7	$\sigma^{1-\gamma^{lipid}(\tau)}$	0.13	$\frac{S_0^{protein}}{S_0^{total}}$	0.93	$\frac{S_0^{protein}}{S_0^{total}}$	0.965
$\frac{S_0^{protein}}{S_0^{total}}$	0.65	$\sigma^{1-\gamma^{lipid}(\tau)}$	2.2833 6E-12	$\frac{S_0^{protein}}{S_0^{total}}$	0.83	$\sigma_{S_0^{protein}(\tau)}$	0.227135682	$\gamma^{protein}$	1.2265217 4	$\gamma^{protein}$	0.991208791
$\gamma^{protein}$	0.697 8160 9	$\sigma_{S_0^{protein}(\tau)}$	0.013	$\gamma^{protein}$	0.83 6842 105	$\gamma^{lipid}(\tau)$	0.27	Dep. ($\Delta S/S_0$)	- 0.2265217	Dep. ($\Delta S/S_0$)	0.008791209
Dep. ($\Delta S/S_0$)	0.302 1839 1	$\gamma^{lipid}(\tau)$	9.3090 4E-11	Dep. ($\Delta S/S_0$)	0.16 3157 895	$S_0^{lipid}(\tau)$	0.780821918				
		$S_0^{lipid}(\tau)$	0.6428 26783			$\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau)^{\square}$	0.210821918				
		$\gamma^{lipid}(\tau) \times S_0^{lipid}(\tau)^{\square}$	5.9841 E-11			$\sigma^{lipid}(\tau \times S_0^{lipid}(\tau))$	0.118594252				

		$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	1.9023 6E-12			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.629178082				
		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.6428 26783			$\gamma^{Protein}(\varphi)$	0.805789474				
		$\gamma^{Protein}(\varphi)$	1			$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.119806496				
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.013			$\sigma^{Protein}(\varphi)$	0.280152487				
		$\sigma^{Protein}(\varphi)$	0.0285 99892								

U- ¹³ CGlu- ¹³ CHM+D ₈											
30-38 ppm peak				22-28 ppm peak				12-18 ppm peak			
		$\gamma^{Lipid}(\varphi)$	0.7163 61345			$\gamma^{Lipid}(\varphi)$	0.98			$\gamma^{Lipid}(\varphi)$	1.03
		$\gamma^{Total}(\varphi)$	0.8820 26161			$\gamma^{Total}(\varphi)$	1.01			$\gamma^{Total}(\varphi)$	0.99 6186 47
At 3.2 ms		$\sigma_0^{Lipid}(\varphi)$	0.0058	At 3.2 ms		$\sigma_0^{Lipid}(\varphi)$	0.012	At 3.2 ms		$\sigma_0^{Lipid}(\varphi)$	0.09 31
S_0^{Lipid}	0.38	$\sigma_0^{Total}(\varphi)$	0.0035	S_0^{Lipid}	-0.25	$\sigma_0^{Total}(\varphi)$	0.019	S_0^{Lipid}	-0.33	$\sigma_0^{Total}(\varphi)$	0.05 1
$S_0^{Protein}$	0.62	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.0067 74216	$S_0^{Protein}$	1.25	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.0224 72205	$S_0^{Protein}$	1.33	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.10 6153 71
S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.0058	S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.012	S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.09 31
γ^{Lipid}	0.72	$\sigma_{S_0}^{Protein}(\varphi)$	0.0267 03082	γ^{Lipid}	0.99	$\sigma_{S_0}^{Protein}(\varphi)$	1.4396 18005	γ^{Lipid}	1.03	$\sigma_{S_0}^{Protein}(\varphi)$	4.97 5484 04
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.88	$\gamma^{Lipid}(\varphi)$	0.7163 61345	$\frac{S_0^{Protein}}{S_0^{Total}}$	1.0057	$\gamma^{Lipid}(\varphi)$	0.98	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.996	$\gamma^{Lipid}(\varphi)$	1.03
$\gamma^{Protein}$	0.97 8064 516	$S_0^{Lipid}(\varphi)$	0.5840 69954	$\gamma^{Protein}$	1.0025 6	$S_0^{Lipid}(\varphi)$	1.5	$\gamma^{Protein}$	1.0044 3609	$S_0^{Lipid}(\varphi)$	1.12 7117 61
Dep. ($\Delta S/S_0$)	0.02 1935 484	$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	0.4184 05138	Dep. ($\Delta S/S_0$)	- 0.0025 6	$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	1.47	Dep. ($\Delta S/S_0$)	- 0.0044 361	$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	1.16 0931 14
		$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	0.0194 26699			$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	1.4109 40466			$\sigma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)$	5.12 5822 75
		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.4636 21024			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	-0.46			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	- 0.16 4744 7
		$\gamma^{Protein}(\varphi)$	0.7937 76534			$\gamma^{Protein}(\varphi)$	- 0.3066 66667			$\gamma^{Protein}(\varphi)$	- 0.14 6164 6
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.0197 39469			$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	1.4110 6839			$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	5.12 6076 46
		$\sigma^{Protein}(\varphi)$	0.0495 90412			$\sigma^{Protein}(\varphi)$	- 0.9856 79937			$\sigma^{Protein}(\varphi)$	- 4.59 3492 6
At 16 ms		$\gamma^{Lipid}(\varphi)$	0.2753 4815	At 16 ms		$\gamma^{Lipid}(\varphi)$	0.84	At 16 ms		$\gamma^{Lipid}(\varphi)$	0.83 8215 93
S_0^{Lipid}	0.38	$\gamma^{Total}(\varphi)$	0.6506 17861	S_0^{Lipid}	-0.25	$\gamma^{Total}(\varphi)$	0.89	S_0^{Lipid}	-0.33	$\gamma^{Total}(\varphi)$	0.98 9674 91
$S_0^{Protein}$	0.62	$\sigma_0^{Lipid}(\varphi)$	0.0029	$S_0^{Protein}$	1.25	$\sigma_0^{Lipid}(\varphi)$	0.016	$S_0^{Protein}$	1.33	$\sigma_0^{Lipid}(\varphi)$	0.02
S_0^{Total}	1	$\sigma_0^{Total}(\varphi)$	0.0045	S_0^{Total}	1	$\sigma_0^{Total}(\varphi)$	0.022	S_0^{Total}	1	$\sigma_0^{Total}(\varphi)$	0.02 8
γ^{Lipid}	0.28	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.0053 53504	γ^{Lipid}	0.84	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.0272 02941	γ^{Lipid}	0.84	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.03 4409 3
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.65	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.0029	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.89	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.016	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9897	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.02
$\gamma^{Protein}$	0.87 6774 194	$\sigma_{S_0}^{Protein}(\varphi)$	0.0076 72874	$\gamma^{Protein}$	0.88	$\sigma_{S_0}^{Protein}(\varphi)$	0.1728 66459	$\gamma^{Protein}$	0.9525 5639	$\sigma_{S_0}^{Protein}(\varphi)$	0.24 2135 26
Dep. ($\Delta S/S_0$)	0.12 3225 806	$\gamma^{Lipid}(\varphi)$	0.2753 4815	Dep. ($\Delta S/S_0$)	0.12	$\gamma^{Lipid}(\varphi)$	0.84	Dep. ($\Delta S/S_0$)	0.0474 4361	$\gamma^{Lipid}(\varphi)$	0.83 8215 93
		$S_0^{Lipid}(\varphi)$	0.5178 62075			$S_0^{Lipid}(\varphi)$	0.3125			$S_0^{Lipid}(\varphi)$	0.93 6179 8

		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.1425 92364			$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.2625			$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.78 4720 82
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.0025 92094			$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.1452 93883			$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)}$	0.20 3823 45
		$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	0.5080 25496			$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	0.6275			$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	0.20 4954 09
		$\gamma^{Protein}(\tau)$	0.9810 05408			$\gamma^{Protein}(\tau)$	2.008			$\gamma^{Protein}(\tau)$	0.21 8925 99
		$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.0051 93164			$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.1469 50034			$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.20 5737 69
		$\sigma^{Protein}(\tau)$	0.0176 5868			$\sigma^{Protein}(\tau)$	1.2062 07836			$\sigma^{Protein}(\tau)$	0.22 6940 51
				At 24 ms				At 24 ms			
At 24 ms		$\gamma^{Lipid}(\tau)$	0.1527 62777	S_0^{Lipid}	-0.25	$\gamma^{Lipid}(\tau)$	0.84	S_0^{Lipid}	-0.33	$\gamma^{Lipid}(\tau)$	0.66 1732 76
S_0^{Lipid}	0.38	$\gamma^{total}(\tau)$	0.5290 6739	$S_0^{Protein}$	1.25	$\gamma^{total}(\tau)$	0.67	$S_0^{Protein}$	1.33	$\gamma^{total}(\tau)$	0.92 0842 39
$S_0^{Protein}$	0.62	$\sigma^{\gamma^{Lipid}(\tau)}$	0.001	S_0^{total}	1	$\sigma^{\gamma^{Lipid}(\tau)}$	0.039	S_0^{total}	1	$\sigma^{\gamma^{Lipid}(\tau)}$	0.04 18
S_0^{total}	1	$\sigma^{\gamma^{total}(\tau)}$	0.007	γ^{Lipid}	0.67	$\sigma^{\gamma^{total}(\tau)}$	0.021	γ^{Lipid}	0.66	$\sigma^{\gamma^{total}(\tau)}$	0.02 9
γ^{Lipid}	0.15	$\sigma^{\gamma^{total}(\tau) - \gamma^{Lipid}(\tau)}$	0.0070 71068	$\frac{S_0^{Protein}}{S_0^{total}}$	0.85	$\sigma^{\gamma^{total}(\tau) - \gamma^{Lipid}(\tau)}$	0.0442 94469	$\frac{S_0^{Protein}}{S_0^{total}}$	0.92	$\sigma^{\gamma^{total}(\tau) - \gamma^{Lipid}(\tau)}$	0.05 0874 75
$\frac{S_0^{Protein}}{S_0^{total}}$	0.53	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	0.001	$\gamma^{Protein}$	0.814	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	0.039	$\gamma^{Protein}$	0.8554 8872	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	0.04 18
$\gamma^{Protein}$	0.76 2903 226	$\sigma^{S_0^{Protein}(\tau)}$	0.0083 62479	Dep. ($\Delta S/S_0$)	0.186	$\sigma^{S_0^{Protein}(\tau)}$	- 0.3790 95676	Dep. ($\Delta S/S_0$)	0.1445 1128	$\sigma^{S_0^{Protein}(\tau)}$	0.17 7704 83
Dep. ($\Delta S/S_0$)	0.23 7096 774	$\gamma^{Lipid}(\tau)$	0.1527 62777			$\gamma^{Lipid}(\tau)$	0.84			$\gamma^{Lipid}(\tau)$	0.66 1732 76
		$S_0^{Lipid}(\tau)$	0.4441 54958			$S_0^{Lipid}(\tau)$	- 1.0625			$S_0^{Lipid}(\tau)$	0.76 5990 92
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.0678 50345			$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	- 0.8925			$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.50 6881 28
		$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}}$	0.0013 52486			$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}}$	- 0.3211 25107			$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}}$	0.12 1874 19
		$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	0.4612 17045			$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	1.5625			$\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})$	0.41 3961 11
		$\gamma^{Protein}(\tau)$	1.0384 14718			$\gamma^{Protein}(\tau)$	- 1.4705 88235			$\gamma^{Protein}(\tau)$	0.54 0425 61
		$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.0071 29461			$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.3218 11023			$\sigma^{\gamma^{total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square})}$	0.12 5276 97
		$\sigma^{Protein}(\tau)$	0.0252 96329			$\sigma^{Protein}(\tau)$	- 0.6058 43924			$\sigma^{Protein}(\tau)$	0.20 6075 65
								At 40 ms		$\gamma^{Lipid}(\tau)$	0.47 1763 9
At 40 ms		$\gamma^{Lipid}(\tau)$	0.0605 873	At 40 ms				S_0^{Lipid}	-0.33	$\gamma^{total}(\tau)$	0.91 3271 74
S_0^{Lipid}	0.38	$\gamma^{total}(\tau)$	0.5340 11361	S_0^{Lipid}	-0.25			$S_0^{Protein}$	1.33	$\sigma^{\gamma^{Lipid}(\tau)}$	0.1
$S_0^{Protein}$	0.62	$\sigma^{\gamma^{Lipid}(\tau)}$	0.002	$S_0^{Protein}$	1.25			S_0^{total}	1	$\sigma^{\gamma^{total}(\tau)}$	0.04 4
S_0^{total}	1	$\sigma^{\gamma^{total}(\tau)}$	0.008	S_0^{total}	1			γ^{Lipid}	0.47	$\sigma^{\gamma^{total}(\tau) - \gamma^{Lipid}(\tau)}$	0.10 9252
γ^{Lipid}	0.06	$\sigma^{\gamma^{total}(\tau) - \gamma^{Lipid}(\tau)}$	0.0082 46211	γ^{Lipid}	0.4			$\frac{S_0^{Protein}}{S_0^{total}}$	0.91	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	0.1
$\frac{S_0^{Protein}}{S_0^{total}}$	0.53	$\sigma^{1 - \gamma^{Lipid}(\tau)}$	0.002	$\frac{S_0^{Protein}}{S_0^{total}}$	0.81			$\gamma^{Protein}$	0.8008 2707	$\sigma^{S_0^{Protein}(\tau)}$	0.26 0407 8
$\gamma^{Protein}$	0.81 8064 516	$\sigma^{S_0^{Protein}(\tau)}$	0.0088 43377	$\gamma^{Protein}$	0.728			Dep. ($\Delta S/S_0$)	0.1991 7293	$\gamma^{Lipid}(\tau)$	0.47 1763 9
Dep. ($\Delta S/S_0$)	0.18 1935 484	$\gamma^{Lipid}(\tau)$	0.0605 873	Dep. ($\Delta S/S_0$)	0.272					$S_0^{Lipid}(\tau)$	0.83 5815 34
		$S_0^{Lipid}(\tau)$	0.5039 57485							$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.39 4307 51
		$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.0305 33423							$\sigma^{\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}}$	0.14 8587 49

		$\sigma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau)$	0.0011 41477						$\gamma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))^{\square}$	0.51 8964 23
		$\gamma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))^{\square}$	0.5034 77938						$\gamma^{\text{Protein}}(\tau)$	0.62 0907 76
		$\gamma^{\text{Protein}}(\tau)$	0.9990 48438						$\sigma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))$	0.15 4965 29
		$\sigma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))$	0.0080 81025						$\sigma^{\text{Protein}}(\tau)$	0.26 7952 76
		$\sigma^{\text{Protein}}(\tau)$	0.0237 58519							

2- ¹³ CGly- ¹³ CHM+D ₈							
30-38 ppm peak		22-28 ppm peak		172-178 ppm peak			
						$\gamma^{\text{Lipid}}(\tau)$	0.94
At 3.2 ms		At 3.2 ms		At 3.2 ms		$\gamma^{\text{Total}}(\tau)$	0.999
S_0^{Lipid}	0.58	S_0^{Lipid}	1.29	S_0^{Lipid}	-0.04	$\sigma_{\gamma}^{\text{Lipid}}(\tau)$	0.0011
S_0^{Protein}	0.41	S_0^{Protein}	-0.29	S_0^{Protein}	1.04	$\sigma_{\gamma}^{\text{Total}}(\tau)$	0.0029
S_0^{Total}	0.99	S_0^{Total}	1	S_0^{Total}	1	$\sigma^{\text{Total}}(\tau) - \gamma^{\text{Lipid}}(\tau)$	0.0031016 1
γ^{Lipid}	0.72	γ^{Lipid}	0.99	γ^{Lipid}	0.9	$\sigma^{\text{Lipid}} - \gamma^{\text{Lipid}}(\tau)$	0.0011
$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.83	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.987	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.9997	$\sigma_{S_0}^{\text{Protein}}(\tau)$	0.0547469
γ^{Protein}	1.00585366	γ^{Protein}	1.00034483	γ^{Protein}	0.99586538	$\gamma^{\text{Lipid}}(\tau)$	0.94
Dep. (ΔS/S ₀)	-0.0058537	Dep. (ΔS/S ₀)	-0.0003448	Dep. (ΔS/S ₀)	0.00413462	$S_0^{\text{Lipid}}(\tau)$	0.9833333 3
						$\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau)^{\square}$	0.9243333 3
						$\sigma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau)$	0.0514734 5
						$\gamma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))^{\square}$	0.0746666 7
						$\gamma^{\text{Protein}}(\tau)$	0.0759322
						$\sigma^{\text{Total}}(\tau) - (\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau))$	0.0515550 8
						$\sigma^{\text{Protein}}(\tau)$	0.0525990 6
						$\gamma^{\text{Lipid}}(\tau)$	0.6211519 5
At 16 ms		At 16 ms		At 16 ms		$\gamma^{\text{Total}}(\tau)$	0.9817907 2
S_0^{Lipid}	0.58	S_0^{Lipid}	1.29	S_0^{Lipid}	-0.04	$\sigma_{\gamma}^{\text{Lipid}}(\tau)$	0.049
S_0^{Protein}	0.41	S_0^{Protein}	-0.29	S_0^{Protein}	1.04	$\sigma_{\gamma}^{\text{Total}}(\tau)$	0.0629
S_0^{Total}	1	S_0^{Total}	1	S_0^{Total}	1	$\sigma^{\text{Total}}(\tau) - \gamma^{\text{Lipid}}(\tau)$	0.0797333 7
γ^{Lipid}	0.28	γ^{Lipid}	0.84	γ^{Lipid}	0.97	$\sigma^{\text{Lipid}} - \gamma^{\text{Lipid}}(\tau)$	0.049
$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.63	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.93	$\frac{S_0^{\text{Protein}}}{S_0^{\text{Total}}}$	0.9328	$\sigma_{S_0}^{\text{Protein}}(\tau)$	0.2438313 9
γ^{Protein}	1.1404878	γ^{Protein}	0.52965517	γ^{Protein}	0.93423077	$\gamma^{\text{Lipid}}(\tau)$	0.6211519 5
Dep. (ΔS/S ₀)	-0.1404878	Dep. (ΔS/S ₀)	0.47034483	Dep. (ΔS/S ₀)	0.06576923	$S_0^{\text{Lipid}}(\tau)$	0.9519351 3
						$\gamma^{\text{Lipid}}(\tau) \times S_0^{\text{Lipid}}(\tau)^{\square}$	0.5912963 6

						$\sigma^{\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta)}$	0.1584763 8
						$\gamma^{total}(\vartheta) - (\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta))^{\square}$	0.3904943 5
						$\gamma^{protein}(\vartheta)$	0.4102111
						$\sigma^{\gamma^{total}(\vartheta) - (\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta))}$	0.1705027 1
						$\sigma^{\gamma^{protein}(\vartheta)}$	0.2076565 9
						$\gamma^{lipid}(\vartheta)$	0.3748382 2
		At 24 ms		At 24 ms		$\gamma^{total}(\vartheta)$	0.8087164
At 24 ms		S_0^{lipid}	1.29	S_0^{lipid}	-0.04	$\sigma^{\gamma^{lipid}(\vartheta)}$	0.085
S_0^{lipid}	0.58	$S_0^{protein}$	-0.29	$S_0^{protein}$	1.04	$\sigma^{\gamma^{total}(\vartheta)}$	0.0527
$S_0^{protein}$	0.41	S_0^{total}	1	S_0^{total}	1	$\sigma^{\gamma^{total}(\vartheta) - \gamma^{lipid}(\vartheta)}$	0.1000114 5
S_0^{total}	0.99	μ_{lipid}	0.67	μ_{lipid}	0.61	$\sigma^{1 - \gamma^{lipid}(\vartheta)}$	0.085
μ_{lipid}	0.15	$\frac{S_0^{protein}}{S_0^{total}}$	0.94	$\frac{S_0^{protein}}{S_0^{total}}$	0.81	$\sigma^{S_0^{protein}(\vartheta)}$	0.1857336 6
$\frac{S_0^{protein}}{S_0^{total}}$	0.36	$\gamma^{protein}$	-0.2610345	$\gamma^{protein}$	0.80230769	$\gamma^{lipid}(\vartheta)$	0.3748382 2
$\gamma^{protein}$	0.66585366	Dep. (ΔS/S ₀)	1.26103448	Dep. (ΔS/S ₀)	0.19769231	$S_0^{lipid}(\vartheta)$	0.6940254 4
Dep. (ΔS/S ₀)	0.33414634					$\gamma^{lipid}(\vartheta) \times S_0^{lipid}(\vartheta)^{\square}$	0.2601472 6
						$\sigma^{\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta)}$	0.0912525 6
						$\gamma^{total}(\vartheta) - (\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta))^{\square}$	0.5485691 4
						$\gamma^{protein}(\vartheta)$	0.7904164 7
						$\sigma^{\gamma^{total}(\vartheta) - (\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta))}$	0.1053770 4
						$\sigma^{\gamma^{protein}(\vartheta)}$	0.2603814 8
						$\gamma^{lipid}(\vartheta)$	0.3028660 5
				At 40 ms		$\gamma^{total}(\vartheta)$	0.6676834 8
At 40 ms		At 40 ms		S_0^{lipid}	-0.04	$\sigma^{\gamma^{lipid}(\vartheta)}$	0.11
S_0^{lipid}	0.58	S_0^{lipid}	1.29	$S_0^{protein}$	1.04	$\sigma^{\gamma^{total}(\vartheta)}$	0.24
$S_0^{protein}$	0.41	$S_0^{protein}$	-0.29	S_0^{total}	1	$\sigma^{\gamma^{total}(\vartheta) - \gamma^{lipid}(\vartheta)}$	0.2640075 8
S_0^{total}	0.99	S_0^{total}	1	μ_{lipid}	0.7	$\sigma^{1 - \gamma^{lipid}(\vartheta)}$	0.11
μ_{lipid}	0.06	μ_{lipid}	0.4	$\frac{S_0^{protein}}{S_0^{total}}$	0.67	$\sigma^{S_0^{protein}(\vartheta)}$	0.3876017 6
$\frac{S_0^{protein}}{S_0^{total}}$	0.36	$\frac{S_0^{protein}}{S_0^{total}}$	0.87	$\gamma^{protein}$	0.67115385	$\mu_{lipid}(\vartheta)$	0.3028660 5
$\gamma^{protein}$	0.79317073	$\gamma^{protein}$	-1.2206897	Dep. (ΔS/S ₀)	0.32884615	$S_0^{lipid}(\vartheta)$	0.5233103 8
Dep. (ΔS/S ₀)	0.20682927	Dep. (ΔS/S ₀)	2.22068966			$\gamma^{lipid}(\vartheta) \times S_0^{lipid}(\vartheta)^{\square}$	0.1584929 5
						$\sigma^{\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta)}$	0.1307454 6
						$\gamma^{total}(\vartheta) - (\mu_{lipid}(\vartheta) \times S_0^{lipid}(\vartheta))^{\square}$	0.5091905 3

						$\gamma^{Protein}(\tau)$	0.9730182 2
						$\sigma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))$	0.2733027 2
						$\sigma^{Protein}(\tau)$	0.8900248 1

1,3- ¹³ CGly- ¹³ CHM+D ₈					
30-38 ppm peak		22-28 ppm peak			
				$\gamma^{Lipid}(\tau)$	0.988134148
At 3.2 ms		At 3.2 ms		$\gamma^{Total}(\tau)$	0.991515497
S_0^{Lipid}	0.58	S_0^{Lipid}	0.01	$\sigma_f^{Lipid}(\tau)$	0.0312
$S_0^{Protein}$	0.42	$S_0^{Protein}$	0.99	$\sigma_f^{Total}(\tau)$	0.02
S_0^{Total}	1	S_0^{Total}	1	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.037059951
γ^{Lipid}	0.83	γ^{Lipid}	0.992	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.0312
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.83	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.987	$\sigma_{S_0^{Protein}}^{Protein}(\tau)$	3.211865664
$\gamma^{Protein}$	0.83	$\gamma^{Protein}$	0.986949495	$\gamma^{Lipid}(\tau)$	0.988134148
Dep. ($\Delta S/S_0$)	0.17	Dep. ($\Delta S/S_0$)	0.013050505	$S_0^{Lipid}(\tau)$	0.284964704
				$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.281583355
				$\sigma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)$	3.173766596
				$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.709932142
				$\gamma^{Protein}(\tau)$	2.49129851
				$\sigma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))$	3.173829612
				$\sigma^{Protein}(\tau)$	30.20785962
				$\gamma^{Lipid}(\tau)$	0.8355254
At 16 ms		At 16 ms		$\gamma^{Total}(\tau)$	0.9807136
S_0^{Lipid}	0.58	S_0^{Lipid}	0.01	$\sigma_f^{Lipid}(\tau)$	0.0155
$S_0^{Protein}$	0.42	$S_0^{Protein}$	0.99	$\sigma_f^{Total}(\tau)$	0.11
S_0^{Total}	1	S_0^{Total}	1	$\sigma^{Total}(\tau) - \gamma^{Lipid}(\tau)$	0.111086678
γ^{Lipid}	0.62	γ^{Lipid}	0.98	$\sigma^{1-\gamma^{Lipid}}(\tau)$	0.0155
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.63	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.93	$\sigma_{S_0^{Protein}}^{Protein}(\tau)$	0.68050711
$\gamma^{Protein}$	0.64380952	$\gamma^{Protein}$	0.929494949	$\gamma^{Lipid}(\tau)$	0.8355254
Dep. ($\Delta S/S_0$)	0.35619048	Dep. ($\Delta S/S_0$)	0.070505051	$S_0^{Lipid}(\tau)$	0.882739344
				$\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)^{\square}$	0.737551143
				$\sigma^{Lipid}(\tau) \times S_0^{Lipid}(\tau)$	0.56874558
				$\gamma^{Total}(\tau) - (\gamma^{Lipid}(\tau) \times S_0^{Lipid}(\tau))^{\square}$	0.243162457

				$\gamma^{Protein}(\epsilon)$	0.275463486
				$\sigma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid})$	0.579285366
				$\sigma^{Protein}(\epsilon)$	0.689739616
				$\gamma^{Lipid}(\epsilon)$	0.666307562
				$\gamma^{Total}(\epsilon)$	0.930772984
				$\sigma_T^{Lipid}(\tau)$	0.039
		At 24 ms		$\sigma_T^{Total}(\tau)$	0.011
At 24 ms		S_0^{Lipid}	0.01	$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.040521599
S_0^{Lipid}	0.58	$S_0^{Protein}$	0.99	$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.039
$S_0^{Protein}$	0.42	S_0^{Total}	1	$\sigma^{S_0^{Protein}}(\epsilon)$	0.152728835
S_0^{Total}	1	γ^{Lipid}	0.67	$\gamma^{Lipid}(\epsilon)$	0.666307562
γ^{Lipid}	0.57	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.93	$S_0^{Lipid}(\tau)$	0.79254245
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.36	$\gamma^{Protein}$	0.932626263	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.528077027
$\gamma^{Protein}$	0.07	Dep. ($\Delta S/S_0$)	0.067373737	$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	0.106354898
Dep. ($\Delta S/S_0$)	0.93			$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.402695957
				$\gamma^{Protein}(\epsilon)$	0.508106483
				$\sigma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid})$	0.106922235
				$\sigma^{Protein}(\epsilon)$	0.166698369
				$\gamma^{Lipid}(\epsilon)$	0.392139434
				$\gamma^{Total}(\epsilon)$	0.808966873
				$\sigma_T^{Lipid}(\tau)$	0.1
At 40 ms		At 40 ms		$\sigma_T^{Total}(\tau)$	0.1
S_0^{Lipid}	0.58	S_0^{Lipid}	0.01	$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.141421356
$S_0^{Protein}$	0.42	$S_0^{Protein}$	0.99	$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.1
S_0^{Total}	1	S_0^{Total}	1	$\sigma^{S_0^{Protein}}(\epsilon)$	0.258561695
γ^{Lipid}	0.03	γ^{Lipid}	0.4	$\gamma^{Lipid}(\epsilon)$	0.392139434
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.36	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.81	$S_0^{Lipid}(\tau)$	0.685728705
$\gamma^{Protein}$	0.81571429	$\gamma^{Protein}$	0.814141414	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.268901266
Dep. ($\Delta S/S_0$)	0.18428571	Dep. ($\Delta S/S_0$)	0.185858586	$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	0.12240353
				$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.540065607
				$\gamma^{Protein}(\epsilon)$	0.787579115

				$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.158058926
				$\sigma^{Protein}(\varphi)$	0.375922522

U- ¹³ CGLu- ¹³ CHM+ D ₆ Chol											
30-38 ppm peak				22-28 ppm peak				12-18 ppm peak		180-186 ppm peak	
		$\gamma^{Lipid}(\varphi)$	0.976774 086			$\gamma^{Lipid}(\varphi)$	0.96578 966				
At 3.2 ms		$\gamma^{Total}(\varphi)$	0.900632 558	At 3.2 ms		$\gamma^{Total}(\varphi)$	0.99068 854	At 3.2 ms		At 3.2 ms	
S_0^{Lipid}	5.5	$\sigma_r^{Lipid}(\varphi)$	0.00713	S_0^{Lipid}	4	$\sigma_r^{Lipid}(\varphi)$	0.029	S_0^{Lipid}	6		
$S_0^{Protein}$	-4.5	$\sigma_r^{Total}(\varphi)$	0.002	$S_0^{Protein}$	-3	$\sigma_r^{Total}(\varphi)$	0.003	$S_0^{Protein}$	-5		
S_0^{Total}	1	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.007405 194	S_0^{Total}	1	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.02915 476	S_0^{Total}	1		
γ^{Lipid}	0.9768	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.00713	γ^{Lipid}	0.966	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.029	γ^{Lipid}	0.982		
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.9	$\sigma_{S_0^{Protein}}(\varphi)$	- 1.055685 395	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.88	$\sigma_{S_0^{Protein}}(\varphi)$	1.05210 751	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.87		
$\gamma^{Protein}$	0.9938666 7	$\gamma^{Lipid}(\varphi)$	0.976774 086	$\gamma^{Protein}$	0.99466 667	$\gamma^{Lipid}(\varphi)$	0.96578 966	$\gamma^{Protein}$	1.004 4		
Dep. (ΔS/S ₀)	0.0061333 3	$S_0^{Lipid}(\varphi)$	- 3.278300 609	Dep. (ΔS/S ₀)	0.00533 333	$S_0^{Lipid}(\varphi)$	0.72781 737	Dep. (ΔS/S ₀)	- 0.004 4	Dephasing	0.09
		$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	3.202159 081			$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	0.70291 849				
		$\sigma^{\gamma^{Lipid}}(\varphi) \times S_0^{Lipid}(\varphi)$	- 1.031431 025			$\sigma^{\gamma^{Lipid}}(\varphi) \times S_0^{Lipid}(\varphi)$	1.01633 374				
		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	4.102791 639			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.28777 005				
		$\gamma^{Protein}(\varphi)$	1.251499 52			$\gamma^{Protein}(\varphi)$	0.39538 771				
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	1.031432 964			$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	1.01633 817				
		$\sigma^{Protein}(\varphi)$	0.00639			$\sigma^{Protein}(\varphi)$	1.50886 25				
		$\gamma^{Lipid}(\varphi)$	0.914376 467								
		$\gamma^{Total}(\varphi)$	0.852911 245			$\gamma^{Lipid}(\varphi)$	0.86337 286				
At 16 ms		$\sigma_r^{Lipid}(\varphi)$	0.0065	At 16 ms		$\gamma^{Total}(\varphi)$	0.85490 156	At 16 ms		At 16 ms	
S_0^{Lipid}	5.5	$\sigma_r^{Total}(\varphi)$	0.0045	S_0^{Lipid}	4	$\sigma_r^{Lipid}(\varphi)$	0.023	S_0^{Lipid}	6		
$S_0^{Protein}$	-4.5	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.007905 694	$S_0^{Protein}$	-3	$\sigma_r^{Total}(\varphi)$	0.0064	$S_0^{Protein}$	-5		
S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.0065	S_0^{Total}	1	$\sigma^{Total}(\varphi) - \gamma^{Lipid}(\varphi)$	0.02387 384	S_0^{Total}	1		
γ^{Lipid}	0.91	$\sigma_{S_0^{Protein}}(\varphi)$	- 0.107213 293	γ^{Lipid}	0.86	$\sigma^{1-\gamma^{Lipid}}(\varphi)$	0.023	γ^{Lipid}	0.9		
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.85	$\gamma^{Lipid}(\varphi)$	0.914376 467	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.855	$\sigma_{S_0^{Protein}}(\varphi)$	- 0.17504 86	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.88		
$\gamma^{Protein}$	0.9233333 3	$S_0^{Lipid}(\varphi)$	- 0.717854 304	$\gamma^{Protein}$	0.86166 667	$\gamma^{Lipid}(\varphi)$	0.86337 286	$\gamma^{Protein}$	0.904		
Dep. (ΔS/S ₀)	0.0766666 7	$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	- 0.656389 083	Dep. (ΔS/S ₀)	0.13833 333	$S_0^{Lipid}(\varphi)$	- 0.06200 31	Dep. (ΔS/S ₀)	0.096	Dephasing	0.08
		$\sigma^{\gamma^{Lipid}}(\varphi) \times S_0^{Lipid}(\varphi)$	- 0.098144 293			$\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi)^{\square}$	- 0.05353 18				
		$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	1.509300 328			$\sigma^{\gamma^{Lipid}}(\varphi) \times S_0^{Lipid}(\varphi)$	- 0.15113 89				
		$\gamma^{Protein}(\varphi)$	- 2.102516 232			$\gamma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))^{\square}$	0.90843 337				
		$\sigma^{Total}(\varphi) - (\gamma^{Lipid}(\varphi) \times S_0^{Lipid}(\varphi))$	0.098247 404			$\gamma^{Protein}(\varphi)$	- 14.6514 14				

		$\sigma^{Protein}(\epsilon)$	0.00455			$\sigma^{Total}(\epsilon - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)))$	0.15127 439				
						$\sigma^{Protein}(\epsilon)$	- 41.4360 94				
		$\gamma^{Lipid}(\epsilon)$	0.786709 742								
		$\gamma^{Total}(\epsilon)$	0.871677 834			$\gamma^{Lipid}(\epsilon)$	0.45408 285				
		$\sigma_r^{Lipid}(\epsilon)$	0.002			$\gamma^{Total}(\epsilon)$	0.82359 934	At 24 ms		At 24 ms	
At 24 ms		$\sigma_r^{Total}(\epsilon)$	0.11	At 24 ms		$\sigma_r^{Lipid}(\epsilon)$	0.0076	S_0^{Lipid}	6		
S_0^{Lipid}	5.5	$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.110018 18	S_0^{Lipid}	4	$\sigma_r^{Total}(\epsilon)$	0.0154	$S_0^{Protein}$	-5		
$S_0^{Protein}$	-4.5	$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.002	$S_0^{Protein}$	-3	$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.01717 323	S_0^{Total}	1		
S_0^{Total}	1	$\sigma_{S_0}^{Protein}(\epsilon)$	0.515827 897	S_0^{Total}	1	$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.0076	γ^{Lipid}	0.59		
γ^{Lipid}	0.79	$\gamma^{Lipid}(\epsilon)$	0.786709 742	γ^{Lipid}	0.45	$\sigma_{S_0}^{Protein}(\epsilon)$	0.03283 861	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.84		
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.87	$S_0^{Lipid}(\epsilon)$	0.398368 368	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.82	$\gamma^{Lipid}(\epsilon)$	0.45408 285	$\gamma^{Protein}$	0.54		
$\gamma^{Protein}$	0.772222 2	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.313400 276	$\gamma^{Protein}$	0.32666 667	$S_0^{Lipid}(\epsilon)$	0.67687 283	Dep. ($\Delta S/S_0$)	0.46	Dephasing	0.27
Dep. ($\Delta S/S_0$)	0.227777 8	$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	0.405807 614	Dep. ($\Delta S/S_0$)	0.67333 333	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.30735 635				
		$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.558277 558			$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	0.01577 386				
		$\gamma^{Protein}(\epsilon)$	1.401410 362			$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.51624 299				
		$\sigma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))$	0.420451 923			$\gamma^{Protein}(\epsilon)$	0.76268 83				
		$\sigma^{Protein}(\epsilon)$	0.1148			$\sigma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))$	0.02204 483				
						$\sigma^{Protein}(\epsilon)$	0.04929 363				
		$\gamma^{Lipid}(\epsilon)$	0.860720 106								
		$\gamma^{Total}(\epsilon)$	0.990688 539								
		$\sigma_r^{Lipid}(\epsilon)$	0.011								
		$\sigma_r^{Total}(\epsilon)$	0.009			$\gamma^{Lipid}(\epsilon)$	0.70017 853				
		$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.014212 67			$\gamma^{Total}(\epsilon)$	0.50387 782				
		$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.011			$\sigma_r^{Lipid}(\epsilon)$	0.0337	At 40 ms		At 40 ms	
At 40 ms		$\sigma_{S_0}^{Protein}(\epsilon)$	0.125874 195	At 40 ms		$\sigma_r^{Total}(\epsilon)$	0.0145	S_0^{Lipid}	6		
S_0^{Lipid}	5.5	$\gamma^{Lipid}(\epsilon)$	0.860720 106	S_0^{Lipid}	4	$\sigma^{Total}(\epsilon) - \gamma^{Lipid}(\epsilon)$	0.03668 705	$S_0^{Protein}$	-5		
$S_0^{Protein}$	-4.5	$S_0^{Lipid}(\epsilon)$	0.933145 695	$S_0^{Protein}$	-3	$\sigma^{1-\gamma^{Lipid}}(\epsilon)$	0.0337	S_0^{Total}	1		
S_0^{Total}	1	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.803177 261	S_0^{Total}	1	$\sigma_{S_0}^{Protein}(\epsilon)$	- 0.14278 79	γ^{Lipid}	0.973 7		
γ^{Lipid}	0.86	$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	0.108827 61	γ^{Lipid}	0.74	$\gamma^{Lipid}(\epsilon)$	0.70017 853	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.836 1		
$\frac{S_0^{Protein}}{S_0^{Total}}$	0.991	$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.187511 278	$\frac{S_0^{Protein}}{S_0^{Total}}$	0.5	$S_0^{Lipid}(\epsilon)$	- 0.65472 53	$\gamma^{Protein}$	1.001 22		
$\gamma^{Protein}$	0.830888 9	$\gamma^{Protein}(\epsilon)$	0.200945 339	$\gamma^{Protein}$	0.82	$\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)^{\square}$	0.45842 46	Dep. ($\Delta S/S_0$)	0.001 22	Dephasing	0.59
Dep. ($\Delta S/S_0$)	0.169111 1	$\sigma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))$	0.109199 124	Dep. ($\Delta S/S_0$)	0.18	$\sigma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon)$	- 0.10238 28				
		$\sigma^{Protein}(\epsilon)$	0.015			$\gamma^{Total}(\epsilon) - (\gamma^{Lipid}(\epsilon) \times S_0^{Lipid}(\epsilon))^{\square}$	0.96230 243				

						$\gamma^{Protein}(\varphi)$	- 1.46978 04				
						$\sigma^{total}(\varphi) - (\gamma^{lipid}(\varphi) \times S_{0}^{lipid}(\varphi))$	0.10340 446				
						$\sigma^{Protein}(\varphi)$	- 0.35733 84				

NMR File Location:

All data were acquired on the Bruker 400MHz solid state nmr. The computer name is ssnmr2.cem.msu.edu.

Figure 5.4: /opt/nmrdata/user/MD/phoenix1p6/D10_lipid

Figure 5.5: /opt/nmrdata/user/MD/phoenix1p6/U-Glu_HM_D10

Figure 5.6: /opt/nmrdata/user/MD/phoenix1p6/1_3_13CGly_HM_D10

Figure 5.7: /opt/nmrdata/user/MD/phoenix1p6/2_13CGly_HM_D10

Figure 5.10: /opt/nmrdata/user/MD/phoenix1p6/D8_lipid

Figure 5.11: /opt/nmrdata/user/MD/phoenix1p6/U_13CGlu_HM_D8

Figure 5.12: /opt/nmrdata/user/MD/phoenix1p6/1_3_13CGly_HM_D8

Figure 5.13: /opt/nmrdata/user/MD/phoenix1p6/2_13CGly_HM_D8

Figure 5.15: /opt/nmrdata/user/MD/phoenix1p6/D6_Chol

Figure 5.16: /opt/nmrdata/user/MD/phoenix1p6/U_13CGlu_HM_D6_Chol