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APPENDICES

APPENDIX I

Data from Gas Chromatography

Plain gel + tea tree oil

105

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 0.5% Span 20

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	160	165	166
5	205	190	202
6	520	560	558

Plain gel + tea tree oil + 1% Span 20

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	245	240	243
4	266	278	272
5	290	282	285
6	312	322	319

Plain gel + tea tree oil + 2% Span 20

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 0.5% Tween 20

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 1% Tween 20

Time (hour)	Response (mV)		
1	0	0	0
2	158	162	161
3	291	285	289
4	366	348	357
5	480	492	489
6	591	602	598

Plain gel + tea tree oil + 2% Tween 20

Time (hour)	Response (mV)		
1	0	0	0
2	195	201	197
3	244	240	244
4	387	380	381
5	422	435	430
6	498	497	492

Plain gel + tea tree oil + 0.5% Brij 97

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	118	98	111

Plain gel + tea tree oil + 1% Brij 97

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	213	206	211

Plain gel + tea tree oil + 2% Brij 97

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 0.5% Tween 80

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 1% Tween 80

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Plain gel + tea tree oil + 2% Tween 80

Time (hour)	Response (mV)		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	307	308	308

APPENDIX II

Statistic

The SAS System

OBS	EMUL	CONC	TIME	RESP
1	a1	b1	1	0
2	a1	b1	2	0
3	a1	b1	3	0
4	a1	b1	4	0
5	a1	b1	5	0
6	a1	b1	6	0
7	a1	b1	1	0
8	a1	b1	2	0
9	a1	b1	3	0
10	a1	b1	4	0
11	a1	b1	5	0
12	a1	b1	6	0
13	a1	b1	1	0
14	a1	b1	2	0
15	a1	b1	3	0
16	a1	b1	4	0
17	a1	b1	5	0
18	a1	b1	6	0
19	a1	b2	1	0
20	a1	b2	2	158
21	a1	b2	3	291
22	a1	b2	4	366
23	a1	b2	5	480
24	a1	b2	6	591
25	a1	b2	1	0
26	a1	b2	2	162
27	a1	b2	3	285
28	a1	b2	4	348
29	a1	b2	5	492
30	a1	b2	6	602
31	a1	b2	1	0
32	a1	b2	2	161
33	a1	b2	3	289
34	a1	b2	4	357
35	a1	b2	5	489
36	a1	b2	6	598
37	a1	b3	1	0
38	a1	b3	2	195
39	a1	b3	3	244
40	a1	b3	4	387
41	a1	b3	5	422
42	a1	b3	6	498
43	a1	b3	1	0
44	a1	b3	2	201
45	a1	b3	3	240
46	a1	b3	4	380
47	a1	b3	5	435
48	a1	b3	6	497
49	a1	b3	1	0
50	a1	b3	2	197
51	a1	b3	3	244
52	a1	b3	4	381
53	a1	b3	5	430

The SAS System

OBS	EMUL	CONC	TIME	RESP
54	a1	b3	6	492
55	a2	b1	1	0
56	a2	b1	2	0
57	a2	b1	3	0
58	a2	b1	4	160
59	a2	b1	5	205
60	a2	b1	6	520
61	a2	b1	1	0
62	a2	b1	2	0
63	a2	b1	3	0
64	a2	b1	4	165
65	a2	b1	5	190
66	a2	b1	6	560
67	a2	b1	1	0
68	a2	b1	2	0
69	a2	b1	3	0
70	a2	b1	4	166
71	a2	b1	5	202
72	a2	b1	6	558
73	a2	b2	1	0
74	a2	b2	2	0
75	a2	b2	3	245
76	a2	b2	4	266
77	a2	b2	5	290
78	a2	b2	6	312
79	a2	b2	1	0
80	a2	b2	2	0
81	a2	b2	3	240
82	a2	b2	4	278
83	a2	b2	5	282
84	a2	b2	6	322
85	a2	b2	1	0
86	a2	b2	2	0
87	a2	b2	3	243
88	a2	b2	4	272
89	a2	b2	5	285
90	a2	b2	6	319
91	a2	b3	1	0
92	a2	b3	2	0
93	a2	b3	3	0
94	a2	b3	4	0
95	a2	b3	5	0
96	a2	b3	6	0
97	a2	b3	1	0
98	a2	b3	2	0
99	a2	b3	3	0
100	a2	b3	4	0
101	a2	b3	5	0
102	a2	b3	6	0
103	a2	b3	1	0
104	a2	b3	2	0
105	a2	b3	3	0
106	a2	b3	4	0

The SAS System

OBS	EMUL	CONC	TIME	RESP
107	a2	b3	5	0
108	a2	b3	6	0
109	a3	b1	1	0
110	a3	b1	2	0
111	a3	b1	3	0
112	a3	b1	4	0
113	a3	b1	5	0
114	a3	b1	6	118
115	a3	b1	1	0
116	a3	b1	2	0
117	a3	b1	3	0
118	a3	b1	4	0
119	a3	b1	5	0
120	a3	b1	6	98
121	a3	b1	1	0
122	a3	b1	2	0
123	a3	b1	3	0
124	a3	b1	4	0
125	a3	b1	5	0
126	a3	b1	6	111
127	a3	b2	1	0
128	a3	b2	2	0
129	a3	b2	3	0
130	a3	b2	4	0
131	a3	b2	5	0
132	a3	b2	6	213
133	a3	b2	1	0
134	a3	b2	2	0
135	a3	b2	3	0
136	a3	b2	4	0
137	a3	b2	5	0
138	a3	b2	6	206
139	a3	b2	1	0
140	a3	b2	2	0
141	a3	b2	3	0
142	a3	b2	4	0
143	a3	b2	5	0
144	a3	b2	6	211
145	a3	b3	1	0
146	a3	b3	2	0
147	a3	b3	3	0
148	a3	b3	4	0
149	a3	b3	5	0
150	a3	b3	6	0
151	a3	b3	1	0
152	a3	b3	2	0
153	a3	b3	3	0
154	a3	b3	4	0
155	a3	b3	5	0
156	a3	b3	6	0
157	a3	b3	1	0
158	a3	b3	2	0
159	a3	b3	3	0

The SAS System

OBS	EMUL	CONC	TIME	RESP
160	a3	b3	4	0
161	a3	b3	5	0
162	a3	b3	6	0
163	a4	b1	1	0
164	a4	b1	2	0
165	a4	b1	3	0
166	a4	b1	4	0
167	a4	b1	5	0
168	a4	b1	6	0
169	a4	b1	1	0
170	a4	b1	2	0
171	a4	b1	3	0
172	a4	b1	4	0
173	a4	b1	5	0
174	a4	b1	6	0
175	a4	b1	1	0
176	a4	b1	2	0
177	a4	b1	3	0
178	a4	b1	4	0
179	a4	b1	5	0
180	a4	b1	6	0
181	a4	b2	1	0
182	a4	b2	2	0
183	a4	b2	3	0
184	a4	b2	4	0
185	a4	b2	5	0
186	a4	b2	6	0
187	a4	b2	1	0
188	a4	b2	2	0
189	a4	b2	3	0
190	a4	b2	4	0
191	a4	b2	5	0
192	a4	b2	6	0
193	a4	b2	1	0
194	a4	b2	2	0
195	a4	b2	3	0
196	a4	b2	4	0
197	a4	b2	5	0
198	a4	b2	6	0
199	a4	b3	1	0
200	a4	b3	2	0
201	a4	b3	3	0
202	a4	b3	4	0
203	a4	b3	5	0
204	a4	b3	6	307
205	a4	b3	1	0
206	a4	b3	2	0
207	a4	b3	3	0
208	a4	b3	4	0
209	a4	b3	5	0
210	a4	b3	6	308
211	a4	b3	1	0
212	a4	b3	2	0

The SAS System

OBS	EMUL	CONC	TIME	RESP
213	a4	b3	3	0
214	a4	b3	4	0
215	a4	b3	5	0
216	a4	b3	6	308

The SAS System

General Linear Models Procedure

Class Level Information

Class	Levels	Values
EMUL	4	a1 a2 a3 a4
CONC	3	b1 b2 b3
TIME	6	1 2 3 4 5 6

116

Number of observations in data set = 216

General Linear Models Procedure

Dependent Variable: RESP

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	71	5354711.03703704	75418.46531038	5273.68	0.0001
Error	144	2059.33333333	14.30092593		
Corrected Total	215	5356770.37037037			
	R-Square	C.V.	Rcot MSE	RESP Mean	
	0.999616	4.328305	3.78165651	87.37037037	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
EMUL	3	1273478.25925926	424492.75308642	29682.89	0.0001
CONC	2	302823.78703704	151411.89351852	10587.56	0.0001
EMUL*CONC	6	1200553.21296296	200092.20216049	13991.56	0.0001
TIME(EMUL*CONC)	60	2577855.77777778	42964.26296296	3004.30	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
EMUL	3	1273478.25925927	424492.75308642	29682.89	0.0001
CONC	2	302823.78703704	151411.89351852	10587.56	0.0001
EMUL*CONC	6	1200553.21296297	200092.20216049	13991.56	0.0001
TIME(EMUL*CONC)	60	2577855.77777778	42964.26296296	3004.30	0.0001

General Linear Models Procedure

Dunnnett's T tests for variable: RESP

118

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 144 MSE= 14.30093

Critical Value of Dunnnett's T= 2.374

Minimum Significant Difference= 1.7278

Comparisons significant at the 0.05 level are indicated by '***'.

		Simultaneous		Simultaneous	
		Lower	Difference	Upper	
EMUL		Confidence	Between	Confidence	
Comparison		Limit	Means	Limit	
a2	- a1	-91.2093	-89.4815	-87.7537	***
a3	- a1	-186.0796	-184.3519	-182.6241	***
a4	- a1	-186.7093	-184.9815	-183.2537	***

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