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Appendices

----- O N E W A Y -----

Variable TREAT veratraldehyde
By Variable CON concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	.0001	.0000	15.4758	.0000
Within Groups	20	.0000	.0000		
Total	23	.0001			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
5 %	6	.0078	.0009	.0004	.0069 TO .0087
1 %	6	.0101	.0012	.0005	.0088 TO .0114
0.5%	6	.0116	.0015	.0006	.0100 TO .0132
0.25%	6	.0127	.0015	.0006	.0111 TO .0143
Total	24	.0105	.0023	.0005	.0096 TO .0115

GROUP	MINIMUM	MAXIMUM
5 %	.0068	.0092
1 %	.0086	.0116
0.5%	.0095	.0141
0.25%	.0109	.0151
TOTAL	.0068	.0151

----- O N E W A Y -----

Variable TREAT veratraldehyde
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq .0009 * RANGE * \sqrt{(1/N(I)) + (1/N(J))}$
 with the following values) for RANGE: 2.95

(*) Indicates significant differences which are shown in the lower triangle

Mean	CON	
.0078	5 %	
.0101	1 %	*
.0116	0.5%	-
.0127	0.25%	* *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Subset 2

Group	1 %	0.5%
Mean	.0101	.0116

Subset 3

Group	0.5%	0.25%
Mean	.0116	.0127

- - - - - O N E W A Y - - - - -

Variable T
By Variable CON

curcumin
concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	.0011	.0004	89.2507	.0000
Within Groups	20	.0001	.0000		
Total	23	.0012			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int	for Mean
5 %	6	.0084	.0010	.0004	.0073 TO	.0094
1 %	6	.0166	.0016	.0007	.0149 TO	.0183
0.5%	6	.0211	.0022	.0009	.0187 TO	.0234
0.25%	6	.0267	.0027	.0011	.0238 TO	.0295
Total	24	.0182	.0071	.0014	.0152 TO	.0212

GROUP	MINIMUM	MAXIMUM
5 %	.0068	.0096
1 %	.0146	.0191
0.5%	.0185	.0241
0.25%	.0228	.0298
TOTAL	.0068	.0298

----- O N E W A Y -----

Variable T curcumin
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq .0014 * RANGE * \sqrt{1/N(I) + 1/N(J)}$
 with the following value(s) for RANGE: 2.95

(*) Indicates significant differences which are shown in the lower triangle

Mean	CON	
.0084	5 %	
.0166*	1 %	*
.0211	0.5%	* *
.0267	0.25%	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group 5 %
Mean .0084

Subset 2

Group 1 %
Mean .0166

Subset 3

Group 0.5%
Mean .0211

Subset 4

Group 0.25%
Mean .0267

- - - - - O N E W A Y - - - - -

Variable CONTROL control
By Variable CON concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	.0000	.0000	.4194	.7411
Within Groups	20	.0002	.0000		
Total	23	.0002			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
5 %	6	.0273	.0020	.0008	.0252 TO .0294
1 %	6	.0256	.0032	.0013	.0223 TO .0289
0.5%	6	.0262	.0033	.0013	.0228 TO .0297
0.25%	6	.0273	.0039	.0016	.0232 TO .0314
Total	24	.0266	.0030	.0006	.0253 TO .0279

GROUP	MINIMUM	MAXIMUM
5 %	.0250	.0301
1 %	.0221	.0311
0.5%	.0215	.0313
0.25%	.0221	.0320
TOTAL	.0215	.0320

- - - - - O N E W A Y - - - - -

Variable CONTROL control
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq .0022 * RANGE * SQRT(1/N(I) + 1/N(J))$
 with the following value(s) for RANGE: 2.95

- No two groups are significantly different at the .050 level

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	1 %	0.5%	5 %	0.25%
Mean	.0256	.0262	.0273	.0273

- - - - - O N E W A Y - - - - -

Variable CONTROLC curcumin
By Variable CON concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	.0000	.0000	1.3212	.2953
Within Groups	20	.0001	.0000		
Total	23	.0002			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int	for Mean
5 %	6	.0324	.0021	.0009	.0301 TO	.0346
1 %	6	.0337	.0029	.0012	.0306 TO	.0367
0.5%	6	.0352	.0029	.0012	.0321 TO	.0383
0.25%	6	.0348	.0027	.0011	.0319 TO	.0376
Total	24	.0340	.0028	.0006	.0328 TO	.0352

GROUP	MINIMUM	MAXIMUM
5 %	.0297	.0342
1 %	.0292	.0378
0.5%	.0323	.0398
0.25%	.0312	.0376
TOTAL	.0292	.0398

- - - - - O N E W A Y - - - - -

Variable CONTROLC curcumin
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq .0019 * RANGE * \sqrt{1/N(I) + 1/N(J)}$
 with the following value(s) for RANGE: 2.95

- No two groups are significantly different at the .050 level

Homogeneous Subsets (highest and lowest means are not significantly different):

Subset 1

Group	5 %	1 %	0.25%	0.5%
Mean	.0324	.0337	.0348	.0352

- - - - - O N E W A Y - - - - -

Variable ANTI
By Variable CON

%antifeedant
concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	1195.2511	398.4170	27.8888	.0000
Within Groups	20	285.7178	14.2859		
Total	23	1480.9690			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int	for Mean
5 %	6	71.5983	1.4423	.5888	70.0847 TO	73.1120
1 %	6	59.9483	4.7328	1.9322	54.9816 TO	64.9150
0.5%	6	55.4533	5.0675	2.0688	50.1354 TO	60.7712
0.25%	6	53.3633	2.6428	1.0789	50.5899 TO	56.1368
Total	24	60.0908	8.0243	1.6380	56.7024 TO	63.4792

GROUP	MINIMUM	MAXIMUM
5 %	69.4300	73.5200
1 %	50.9700	64.6800
0.5%	50.2300	64.9400
0.25%	50.6800	57.6900
TOTAL	50.2300	73.5200

- - - - - O N E W A Y - - - - -

Variable ANTI %antifeedant
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq 2.6726 * RANGE * \sqrt{1/N(I) + 1/N(J)}$
 with the following value(s) for RANGE: 2.95

(*) Indicates significant differences which are shown in the lower triangle

		0	
		. 0	
		2 . 1 5	
		5 5	
		% % % %	
Mean	CON		
53.3633	0.25%		
55.4533	0.5%		
59.9483	1 %	*	
71.5983	5 %	* * *	

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	0.25%	0.5%
Mean	53.3633	55.4533

Subset 2

Group	0.5%	1 %
Mean	55.4533	59.9483

Subset 3

Group	5 %
Mean	71.5983

----- O N E W A Y -----

Variable ANTIFEED antifeedant (Curcumin)
By Variable CON concentrations

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	8236.9532	2745.6511	179.2921	.0000
Within Groups	20	306.2769	15.3138		
Total	23	8543.2301			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
5 %	6	74.2017	2.7436	1.1201	71.3225 TO 77.0808
1 %	6	50.6700	3.2535	1.3283	47.2557 TO 54.0843
0.5%	6	39.5683	3.1288	1.2773	36.2849 TO 42.8518
0.25%	6	23.2467	5.7752	2.3577	17.1860 TO 29.3073
Total	24	46.9217	19.2729	3.9341	38.7834 TO 55.0599

GROUP	MINIMUM	MAXIMUM
5 %	70.9000	77.1900
1 %	44.6400	54.0000
0.5%	35.4500	43.8200
0.25%	13.8400	30.2400
TOTAL	13.8400	77.1900

----- O N E W A Y -----

Variable ANTIFEED antifeedant (Curcumin)
By Variable CON concentrations

Multiple Range Tests: LSD test with significance level .05

The difference between two means is significant if
 $MEAN(J) - MEAN(I) \geq 2.7671 * RANGE * \sqrt{1/N(I) + 1/N(J)}$
 with the following value(s) for RANGE: 2.95

(*) Indicates significant differences which are shown in the lower triangle

Mean	CON	
23.2467	0.25%	
39.5683	0.5%	*
50.6700	1 %	* *
74.2017	5 %	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Group 0.25%

Subset 2

Group 0.5%

Mean 39.5683

Subset 3

Group 1 %

Mean 50.6700

Subset 4

Group 5 %

Mean 74.2017

veratraldehyde

- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 5 %				.0273	.002	.001
T treatment 5 %	6	.923	.009	.0078	.001	.000

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0195	.001	.001	37.75	5	.000
95% CI (.018, .021)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 1 %				.0256	.003	.001
T treatment 1 %	6	.738	.094	.0101	.001	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0155	.002	.001	15.82	5	.000
95% CI (.013, .018)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 0.5 %				.0262	.003	.001
T treatment 0.5 %	6	.623	.187	.0116	.002	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0146	.003	.001	13.58	5	.000
95% CI (.012, .017)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 0.25 %				.0272	.004	.002
T treatment 0.25 %	6	.907	.013	.0127	.002	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0145	.003	.001	13.14	5	.000
95% CI (.012, .017)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 5 %	6	.520	.290	.0324	.002	.001
T treatment 5 %				.0084	.001	.000

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0240	.002	.001	32.03	5	.000
95% CI (.022, .026)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 1 %	6	.732	.098	.0337	.003	.001
T treatment 1 %				.0166	.002	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0171	.002	.001	20.61	5	.000
95% CI (.015, .019)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 0.5 %	6	.558	.250	.0361	.003	.001
T treatment 0.5 %				.0211	.002	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0151	.002	.001	15.57	5	.000
95% CI (.013, .018)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
CONTROL 0.25 %	6	.697	.124	.0348	.003	.001
T treatment 0.25 %				.0267	.003	.001

Mean	Paired Differences SD	SE of Mean	t-value	df	2-tail Sig
.0081	.002	.001	9.35	5	.000
95% CI (.006, .010)					

VITA

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