

Figure 6a- % Adults Emerged by Group;

Chi-Square Analysis for a 2x4 Figure

The FREQ Procedure

		Figure of EMERGED by GROUP				
Frequency	EMERGED	GROUP				
Col Pct		Control	CNP	AgCNP	AgNO3	Total
Yes		291	269	225	0	785
		88.18	81.52	68.18	0.00	
No		39	61	105	330	535
		11.82	18.48	31.82	100.00	
Total		330	330	330	330	1320

Statistics for Figure of EMERGED by GROUP

Statistic	DF	Value	Prob
Chi-Square	3	674.0038	<.0001
Likelihood Ratio Chi-Square	3	813.7595	<.0001
Mantel-Haenszel Chi-Square	1	528.1898	<.0001
Phi Coefficient		0.7146	
Contingency Coefficient		0.5814	
Cramer's V		0.7146	

Sample Size = 1320

Proportion Emerged with SE by Group

The FREQ Procedure

GROUP=1=Contro

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	291	88.18	291	88.18
No	39	11.82	330	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.8818
ASE	0.0178
95% Lower Conf Limit	0.8470
95% Upper Conf Limit	0.9166

Exact Conf Limits

95% Lower Conf Limit	0.8420
95% Upper Conf Limit	0.9146

Test of H0: Proportion = 0.5

ASE under H0	0.0275
Z	13.8721
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 330

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=2=CNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	269	81.52	269	81.52
No	61	18.48	330	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.8152
ASE	0.0214
95% Lower Conf Limit	0.7733
95% Upper Conf Limit	0.8570

Exact Conf Limits

95% Lower Conf Limit	0.7690
95% Upper Conf Limit	0.8556

Test of H0: Proportion = 0.5

ASE under H0	0.0275
Z	11.4500
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 330

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=3=AgCNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	225	68.18	225	68.18
No	105	31.82	330	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.6818
ASE	0.0256
95% Lower Conf Limit	0.6316
95% Upper Conf Limit	0.7321

Exact Conf Limits

95% Lower Conf Limit	0.6286
95% Upper Conf Limit	0.7318

Sample Size = 330

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=4=AgNO3

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	330	100.00	330	100.00

Binomial Proportion

EMERGED = No

Proportion	1.0000
ASE	0.0000
95% Lower Conf Limit	1.0000
95% Upper Conf Limit	1.0000

Exact Conf Limits

95% Lower Conf Limit	0.9889
95% Upper Conf Limit	1.0000

Sample Size = 330

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.05)** Conclude

Compare	Diff	SE	q	q(.05)	Conclude
1 vs 4	67.65	1.58	42.82	3.633	R
1 vs 3	14.17	1.58	8.97	3.633	R
1 vs 2	5.33	1.58	3.37	3.633	A
2 vs 4	62.33	1.58	39.45	3.633	R
2 vs 3	8.84	1.58	5.59	3.633	R
3 vs 4	53.49	1.58	33.85	3.633	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.01)** Conclude

Compare	Diff	SE	q	q(.01)	Conclude
1 vs 4	67.65	1.58	42.82	4.403	R
1 vs 3	14.17	1.58	8.97	4.403	R
1 vs 2	5.33	1.58	3.37	4.403	A
2 vs 4	62.33	1.58	39.45	4.403	R
2 vs 3	8.84	1.58	5.59	4.403	R
3 vs 4	53.49	1.58	33.85	4.403	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.001)** Conclude

Compare	Diff	SE	q	q(.001)	Conclude
1 vs 4	67.65	1.58	42.82	5.309	R
1 vs 3	14.17	1.58	8.97	5.309	R
1 vs 2	5.33	1.58	3.37	5.309	A
2 vs 4	62.33	1.58	39.45	5.309	R
2 vs 3	8.84	1.58	5.59	5.309	R
3 vs 4	53.49	1.58	33.85	5.309	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Figure 6a- % Larvae dead by Group;

		Figure of LARVAE_DEAD by GROUP				
Frequency Col Pct	LARVAE_DEAD	GROUP				Total
		Control	CNP	AgCNP	AgNO3	
Yes		22	45	83	269	419
		6.67	13.64	25.15	81.52	
No		308	285	247	61	901
		93.33	86.36	74.85	18.48	
Total		330	330	330	330	1320

Statistics for Figure of LARVAE_DEAD by GROUP

Statistic	DF	Value	Prob
Chi-Square	3	529.6343	<.0001
Likelihood Ratio Chi-Square	3	537.0773	<.0001
Mantel-Haenszel Chi-Square	1	424.0440	<.0001
Phi Coefficient		0.6334	
Contingency Coefficient		0.5351	
Cramer's V		0.6334	

Sample Size = 1320

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=1=Contro

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	22	6.67	22	6.67
No	308	93.33	330	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion 0.0667

ASE 0.0137

95% Lower Conf Limit 0.0398

95% Upper Conf Limit 0.0936

Exact Conf Limits

95% Lower Conf Limit 0.0422

95% Upper Conf Limit 0.0992

Test of H0: Proportion = 0.5

ASE under H0 0.0275

Z -15.7438

One-sided Pr < Z <.0001

Two-sided Pr > |Z| <.0001

Sample Size = 330

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=2=CNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	45	13.64	45	13.64
No	285	86.36	330	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.1364
ASE	0.0189
95% Lower Conf Limit	0.0993
95% Upper Conf Limit	0.1734

Exact Conf Limits

95% Lower Conf Limit	0.1012
95% Upper Conf Limit	0.1782

Test of H0: Proportion = 0.5

ASE under H0	0.0275
Z	-13.2116
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 330

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=3=AgCNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	83	25.15	83	25.15
No	247	74.85	330	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.2515
ASE	0.0239
95% Lower Conf Limit	0.2047
95% Upper Conf Limit	0.2983

Exact Conf Limits

95% Lower Conf Limit	0.2056
95% Upper Conf Limit	0.3019

Test of H0: Proportion = 0.5

ASE under H0	0.0275
Z	-9.0279
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 330

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=4=AgNO3

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	269	81.52	269	81.52
No	61	18.48	330	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.8152
ASE	0.0214
95% Lower Conf Limit	0.7733
95% Upper Conf Limit	0.8570

Exact Conf Limits

95% Lower Conf Limit	0.7690
95% Upper Conf Limit	0.8556

Test of H0: Proportion = 0.5

ASE under H0	0.0275
Z	11.4500
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 330

Chi-Square Analysis for a 2x4 Figure

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.05)** Conclude

Compare	Diff	SE	q	q(.05)	Conclude
4 vs 1	49.36	1.58	31.24	3.633	R
4 vs 2	42.71	1.58	27.03	3.633	R
4 vs 3	34.32	1.58	21.72	3.633	R
3 vs 1	15.04	1.58	9.52	3.633	R
3 vs 2	8.39	1.58	5.31	3.633	R
2 vs 1	6.65	1.58	4.21	3.633	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Chi-Square Analysis for a 2x4 Figure

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.01)** Conclude

Compare	Diff	SE	q	q(.01)	Conclude
4 vs 1	49.36	1.58	31.24	4.403	R
4 vs 2	42.71	1.58	27.03	4.403	R
4 vs 3	34.32	1.58	21.72	4.403	R
3 vs 1	15.04	1.58	9.52	4.403	R
3 vs 2	8.39	1.58	5.31	4.403	R
2 vs 1	6.65	1.58	4.21	4.403	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Chi-Square Analysis for a 2x4 Figure

Tukey Style Multiple Comparisons of Proportions

Compare Diff SE q **q(.001)** Conclude

Compare	Diff	SE	q	q(.001)	Conclude
4 vs 1	49.36	1.58	31.24	5.309	R
4 vs 2	42.71	1.58	27.03	5.309	R
4 vs 3	34.32	1.58	21.72	5.309	R
3 vs 1	15.04	1.58	9.52	5.309	R
3 vs 2	8.39	1.58	5.31	5.309	R
2 vs 1	6.65	1.58	4.21	5.309	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Figure 6b- % Adults Emerged by Group;

Chi-Square Analysis for a 2x4 Figure

The FREQ Procedure

Frequency Col Pct	EMERGED	Figure of EMERGED by GROUP					Total
		GROUP					
		1=Control_with	2=Control_without	3=CNP	4=AgCNP	5=AgNO3	
Yes		192	150	192	37	0	571
		91.43	71.43	91.43	17.62	0.00	
No		18	60	18	173	210	479
		8.57	28.57	8.57	82.38	100.00	
Total		210	210	210	210	210	1050

Statistics for Figure of EMERGED by GROUP

Statistic	DF	Value	Prob
Chi-Square	4	621.7024	<.0001

Sample Size = 1050

Adults Emerged with SE by Group

The FREQ Procedure
GROUP=1=Control_with

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	192	91.43	192	91.43

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	18	8.57	210	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.9143
ASE	0.0193
95% Lower Conf Limit	0.8764
95% Upper Conf Limit	0.9521

Exact Conf Limits

95% Lower Conf Limit	0.8679
95% Upper Conf Limit	0.9484

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	12.0071
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Adults Emerged with SE by Group

The FREQ Procedure
GROUP=2=Control_without

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	150	71.43	150	71.43
No	60	28.57	210	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.7143
ASE	0.0312
95% Lower Conf Limit	0.6532
95% Upper Conf Limit	0.7754

Exact Conf Limits

95% Lower Conf Limit	0.6481
95% Upper Conf Limit	0.7743

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	6.2106
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Adults Emerged with SE by Group

The FREQ Procedure

GROUP=3=CNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	192	91.43	192	91.43
No	18	8.57	210	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.9143
ASE	0.0193
95% Lower Conf Limit	0.8764
95% Upper Conf Limit	0.9521

Exact Conf Limits

95% Lower Conf Limit	0.8679
95% Upper Conf Limit	0.9484

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	12.0071
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Adults Emerged with SE by Group

The FREQ Procedure

GROUP=4=AgCNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	37	17.62	37	17.62
No	173	82.38	210	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.1762
ASE	0.0263
95% Lower Conf Limit	0.1247
95% Upper Conf Limit	0.2277

Exact Conf Limits

95% Lower Conf Limit	0.1272
95% Upper Conf Limit	0.2346

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	-9.3849
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Adults Emerged with SE by Group

The FREQ Procedure

GROUP=5=AgNO3

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	210	100.00	210	100.00

Binomial Proportion

EMERGED = No

Proportion	1.0000
ASE	0.0000
95% Lower Conf Limit	1.0000
95% Upper Conf Limit	1.0000

Exact Conf Limits

95% Lower Conf Limit	0.9826
95% Upper Conf Limit	1.0000

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	14.4914
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.001)	Conclude
3 vs 5	70.1	1.97	35.58	5.484	R
3 vs 4	47.85	1.97	24.29	5.484	R
3 vs 2	15.16	1.97	7.69	5.484	R
3 vs 1	0	1.97	0	5.484	A
1 vs 5	70.1	1.97	35.58	5.484	R
1 vs 4	47.85	1.97	24.29	5.484	R
1 vs 2	15.16	1.97	7.69	5.484	R
2 vs 5	54.94	1.97	27.89	5.484	R
2 vs 4	32.7	1.97	16.6	5.484	R
4 vs 5	22.24	1.97	11.29	5.484	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Figure 6b- % Larvae dead by Group;

Chi-Square Analysis for a 2x5 Figure

The FREQ Procedure

Frequency Col Pct	LARVAE_DEAD	Figure of LARVAE_DEAD by GROUP					Total
		1=Control_with	2=Control_without	3=CN	4=AgCN	5=AgNO3	
Yes		12	18	15	138	178	361
		5.71	8.57	7.14	65.71	84.76	
No		198	192	195	72	32	689
		94.29	91.43	92.86	34.29	15.24	
Total		210	210	210	210	210	1050

Statistics for Figure of LARVAE_DEAD by GROUP

Statistic	DF	Value	Prob
Chi-Square	4	535.2138	<.0001
Likelihood Ratio Chi-Square	4	579.2057	<.0001
Mantel-Haenszel Chi-Square	1	430.8201	<.0001
Phi Coefficient		0.7140	
Contingency Coefficient		0.5811	
Cramer's V		0.7140	

Sample Size = 1050

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=1=Control_with

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	12	5.71	12	5.71
No	198	94.29	210	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.0571
ASE	0.0160
95% Lower Conf Limit	0.0257
95% Upper Conf Limit	0.0885

Exact Conf Limits

95% Lower Conf Limit	0.0299
95% Upper Conf Limit	0.0977

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	-12.8352
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=2=Control_without

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	18	8.57	18	8.57
No	192	91.43	210	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.0857
ASE	0.0193
95% Lower Conf Limit	0.0479
95% Upper Conf Limit	0.1236

Exact Conf Limits

95% Lower Conf Limit	0.0516
95% Upper Conf Limit	0.1321

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	-12.0071
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=3=CNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	15	7.14	15	7.14
No	195	92.86	210	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.0714
ASE	0.0178
95% Lower Conf Limit	0.0366
95% Upper Conf Limit	0.1063

Exact Conf Limits

95% Lower Conf Limit	0.0405
95% Upper Conf Limit	0.1151

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	-12.4212
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=4=AgCNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	138	65.71	138	65.71
No	72	34.29	210	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.6571
ASE	0.0328
95% Lower Conf Limit	0.5929
95% Upper Conf Limit	0.7213

Exact Conf Limits

95% Lower Conf Limit	0.5887
95% Upper Conf Limit	0.7211

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	4.5544
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=5=AgNO3

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	178	84.76	178	84.76
No	32	15.24	210	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.8476
ASE	0.0248
95% Lower Conf Limit	0.7990
95% Upper Conf Limit	0.8962

Exact Conf Limits

95% Lower Conf Limit	0.7917
95% Upper Conf Limit	0.8934

Test of H0: Proportion = 0.5

ASE under H0	0.0345
Z	10.0750
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 210

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.001)	Conclude
5 vs 1	52.82	1.97	26.81	5.484	R
5 vs 3	51.18	1.97	25.98	5.484	R
5 vs 2	49.68	1.97	25.22	5.484	R
5 vs 4	12.78	1.97	6.49	5.484	R
4 vs 1	40.04	1.97	20.32	5.484	R
4 vs 3	38.4	1.97	19.49	5.484	R
4 vs 2	36.9	1.97	18.73	5.484	R
2 vs 1	3.14	1.97	1.59	5.484	A
2 vs 3	1.5	1.97	0.76	5.484	A
3 vs 1	1.64	1.97	0.83	5.484	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Figure 6c- % Adults Emerged by Group;

Chi-Square Analysis for a 2x5 Figure

Frequency Col Pct	EMERGED	Figure of EMERGED by GROUP					Total
		GROUP					
		1=Control_with	2=Control_without	3=CNP	4=AgCNP	5=AgNO3	
Yes		161	150	141	34	0	486
		89.44	83.33	78.33	18.89	0.00	
No		19	30	39	146	180	414
		10.56	16.67	21.67	81.11	100.00	
Total		180	180	180	180	180	900

Statistics for Figure of EMERGED by GROUP

Statistic	DF	Value	Prob
Chi-Square	4	496.9315	<.0001
Likelihood Ratio Chi-Square	4	595.7180	<.0001
Mantel-Haenszel Chi-Square	1	428.5893	<.0001
Phi Coefficient		0.7431	
Contingency Coefficient		0.5964	
Cramer's V		0.7431	

Sample Size = 900

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=1=Control_with

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	161	89.44	161	89.44
No	19	10.56	180	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.8944
ASE	0.0229
95% Lower Conf Limit	0.8496
95% Upper Conf Limit	0.9393

Exact Conf Limits

95% Lower Conf Limit	0.8401
95% Upper Conf Limit	0.9352

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	10.5841
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=2=Control_without

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	150	83.33	150	83.33
No	30	16.67	180	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.8333
ASE	0.0278
95% Lower Conf Limit	0.7789
95% Upper Conf Limit	0.8878

Exact Conf Limits

95% Lower Conf Limit	0.7707
95% Upper Conf Limit	0.8846

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	8.9443
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=3=CNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	141	78.33	141	78.33
No	39	21.67	180	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.7833
ASE	0.0307
95% Lower Conf Limit	0.7231
95% Upper Conf Limit	0.8435

Exact Conf Limits

95% Lower Conf Limit	0.7159
95% Upper Conf Limit	0.8412

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	7.6026
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=4=AgCNP

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	34	18.89	34	18.89
No	146	81.11	180	100.00

Binomial Proportion

EMERGED = Yes

Proportion	0.1889
ASE	0.0292
95% Lower Conf Limit	0.1317
95% Upper Conf Limit	0.2461

Exact Conf Limits

95% Lower Conf Limit	0.1345
95% Upper Conf Limit	0.2538

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	-8.3480
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Proportion Emerged with SE by Group

The FREQ Procedure
GROUP=5=AgNO3

EMERGED	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	180	100.00	180	100.00

Binomial Proportion

EMERGED = No

Proportion	1.0000
ASE	0.0000
95% Lower Conf Limit	1.0000
95% Upper Conf Limit	1.0000

Exact Conf Limits

95% Lower Conf Limit	0.9797
95% Upper Conf Limit	1.0000

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	13.4164
One-sided Pr > Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.05)	Conclude
1 vs 5	67.94	2.13	31.9	3.585	R
1 vs 4	44.96	2.13	21.11	3.585	R
1 vs 3	8.69	2.13	4.08	3.585	R
1 vs 2	5.08	2.13	2.38	3.585	A
2 vs 5	62.87	2.13	29.52	3.585	R
2 vs 4	39.89	2.13	18.73	3.585	R
2 vs 3	3.61	2.13	1.7	3.585	A
3 vs 5	59.25	2.13	27.82	3.585	R
3 vs 4	36.27	2.13	17.03	3.585	R
4 vs 5	22.98	2.13	10.79	3.585	R

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.01)	Conclude
1 vs 5	67.94	2.13	31.9	4.603	R
1 vs 4	44.96	2.13	21.11	4.603	R
1 vs 3	8.69	2.13	4.08	4.603	A
1 vs 2	5.08	2.13	2.38	4.603	A
2 vs 5	62.87	2.13	29.52	4.603	R
2 vs 4	39.89	2.13	18.73	4.603	R
2 vs 3	3.61	2.13	1.7	4.603	A
3 vs 5	59.25	2.13	27.82	4.603	R
3 vs 4	36.27	2.13	17.03	4.603	R
4 vs 5	22.98	2.13	10.79	4.603	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.001)	Conclude
1 vs 5	67.94	2.13	31.9	5.484	R
1 vs 4	44.96	2.13	21.11	5.484	R
1 vs 3	8.69	2.13	4.08	5.484	A
1 vs 2	5.08	2.13	2.38	5.484	A
2 vs 5	62.87	2.13	29.52	5.484	R
2 vs 4	39.89	2.13	18.73	5.484	R
2 vs 3	3.61	2.13	1.7	5.484	A
3 vs 5	59.25	2.13	27.82	5.484	R
3 vs 4	36.27	2.13	17.03	5.484	R
4 vs 5	22.98	2.13	10.79	5.484	R

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Figure 6c- % Larvae dead by Group;

Chi-Square Analysis for a 2x5 Figure

The FREQ Procedure

Frequency	LARVAE_DEAD	Figure of LARVAE_DEAD by GROUP					Total
		1=Control_wit h	2=Control_without	3=CN P	4=AgCN P	5=AgNO 3	
Col Pct	D						1
	Yes	11	23	31	104	113	282

	6.11	12.78	17.22	57.78	62.78	
No	169	157	149	76	67	618
	93.89	87.22	82.78	42.22	37.22	
Total	180	180	180	180	180	900

Statistics for Figure of LARVAE_DEAD by GROUP

Statistic	DF	Value	Prob
Chi-Square	4	239.9091	<.0001
Likelihood Ratio Chi-Square	4	250.5727	<.0001
Mantel-Haenszel Chi-Square	1	209.4989	<.0001
Phi Coefficient		0.5163	
Contingency Coefficient		0.4588	
Cramer's V		0.5163	

Sample Size = 900

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=1=Control_with

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	11	6.11	11	6.11
No	169	93.89	180	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.0611
ASE	0.0179
95% Lower Conf Limit	0.0261
95% Upper Conf Limit	0.0961

Exact Conf Limits

95% Lower Conf Limit	0.0309
95% Upper Conf Limit	0.1067

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	-11.7766
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=2=Control_without

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	23	12.78	23	12.78
No	157	87.22	180	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.1278
ASE	0.0249
95% Lower Conf Limit	0.0790
95% Upper Conf Limit	0.1765

Exact Conf Limits

95% Lower Conf Limit	0.0828
95% Upper Conf Limit	0.1855

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	-9.9878
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=3=CNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	31	17.22	31	17.22
No	149	82.78	180	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.1722
ASE	0.0281
95% Lower Conf Limit	0.1171
95% Upper Conf Limit	0.2274

Exact Conf Limits

95% Lower Conf Limit	0.1201
95% Upper Conf Limit	0.2355

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	-8.7952
One-sided Pr < Z	<.0001
Two-sided Pr > Z 	<.0001

Sample Size = 180

Larvae Dead with SE by Group

The FREQ Procedure
GROUP=4=AgCNP

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	104	57.78	104	57.78
No	76	42.22	180	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.5778
ASE	0.0368
95% Lower Conf Limit	0.5056
95% Upper Conf Limit	0.6499

Exact Conf Limits

95% Lower Conf Limit	0.5021
95% Upper Conf Limit	0.6509

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	2.0870
One-sided Pr > Z	0.0184
Two-sided Pr > Z 	0.0369

Sample Size = 180

Larvae Dead with SE by Group

The FREQ Procedure

GROUP=5=AgNO3

LARVAE_DEAD	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	113	62.78	113	62.78
No	67	37.22	180	100.00

Binomial Proportion

LARVAE_DEAD = Yes

Proportion	0.6278
ASE	0.0360
95% Lower Conf Limit	0.5572
95% Upper Conf Limit	0.6984

Exact Conf Limits

95% Lower Conf Limit	0.5527
95% Upper Conf Limit	0.6985

Test of H0: Proportion = 0.5

ASE under H0	0.0373
Z	3.4286
One-sided Pr > Z	0.0003
Two-sided Pr > Z 	0.0006

Sample Size = 180

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.05)	Conclude
5 vs 1	37.77	2.13	17.73	3.585	R
5 vs 2	31.25	2.13	14.67	3.585	R
5 vs 3	27.71	2.13	13.01	3.585	R
5 vs 4	2.91	2.13	1.37	3.585	A
4 vs 1	34.86	2.13	16.37	3.585	R
4 vs 2	28.34	2.13	13.3	3.585	R
4 vs 3	24.8	2.13	11.64	3.585	R
3 vs 1	10.06	2.13	4.72	3.585	R
3 vs 2	3.54	2.13	1.66	3.585	A
2 vs 1	6.52	2.13	3.06	3.585	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.01)	Conclude
5 vs 1	37.77	2.13	17.73	4.603	R
5 vs 2	31.25	2.13	14.67	4.603	R
5 vs 3	27.71	2.13	13.01	4.603	R
5 vs 4	2.91	2.13	1.37	4.603	A
4 vs 1	34.86	2.13	16.37	4.603	R
4 vs 2	28.34	2.13	13.3	4.603	R
4 vs 3	24.8	2.13	11.64	4.603	R
3 vs 1	10.06	2.13	4.72	4.603	R
3 vs 2	3.54	2.13	1.66	4.603	A
2 vs 1	6.52	2.13	3.06	4.603	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.

Tukey Style Multiple Comparisons of Proportions

Compare	Diff	SE	q	q(.001)	Conclude
5 vs 1	37.77	2.13	17.73	5.484	R
5 vs 2	31.25	2.13	14.67	5.484	R
5 vs 3	27.71	2.13	13.01	5.484	R
5 vs 4	2.91	2.13	1.37	5.484	A
4 vs 1	34.86	2.13	16.37	5.484	R
4 vs 2	28.34	2.13	13.3	5.484	R

4 vs 3	24.8	2.13	11.64	5.484	R
3 vs 1	10.06	2.13	4.72	5.484	A
3 vs 2	3.54	2.13	1.66	5.484	A
2 vs 1	6.52	2.13	3.06	5.484	A

Reference: Biostatistical Analysis, Fourth Edition, Jerrold Zar, 1999, p564.
