**DATA** ANINHA;

iNPUT

DOSE HERB$ RESP REP;

CARDS;

0.4 B 180 1

0.5 B 191 1

0.6 B 185 1

0.7 D 170 1

0.8 D 175 1

0.9 D 165 1

0.8 E 190 1

1 E 197 1

1.2 E 193 1

1 A 200 1

1.2 A 210 1

1.3 A 202 1

0.4 B 192 2

0.5 B 202 2

0.6 B 190 2

0.7 D 172 2

0.8 D 180 2

0.9 D 170 2

0.8 E 195 2

1 E 192 2

1.2 E 198 2

1 A 210 2

1.2 A 205 2

1.3 A 207 2

;

**PROC** **GLM**;

CLASS DOSE HERB;

MODEL RESP = HERB DOSE(HERB);

MEANS HERB/ T LINES;

LSMEANS DOSE(HERB)/SLICE= HERB;

LSMEANS DOSE(HERB)/ADJUST=T LINES;RUN;

Sum of

Source DF Squares Mean Square F Value Pr > F

Model 11 3767.458333 342.496212 14.45 <.0001

Error 12 284.500000 23.708333

Corrected Total 23 4051.958333

R-Square Coeff Var Root MSE RESP Mean

0.929787 2.556528 4.869120 190.4583

Source DF Type I SS Mean Square F Value Pr > F

HERB 3 3515.791667 1171.930556 49.43 <.0001

DOSE(HERB) 8 251.666667 31.458333 1.33 0.3177

Source DF Type III SS Mean Square F Value Pr > F

HERB 3 3515.791667 1171.930556 49.43 <.0001

DOSE(HERB) 8 251.666667 31.458333 1.33 0.3177

t Tests (LSD) for RESP

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha 0.05

Error Degrees of Freedom 12

Error Mean Square 23.70833

Critical Value of t 2.17881

Least Significant Difference 6.1251

Means with the same letter are not significantly different.

t Grouping Mean N HERB

A 205.667 6 A

B 194.167 6 E

B

B 190.000 6 B

C 172.000 6 D

DOSE HERB RESP LSMEAN

1 A 205.000000

1.2 A 207.500000

1.3 A 204.500000

0.4 B 186.000000

0.5 B 196.500000

0.6 B 187.500000

0.7 D 171.000000

0.8 D 177.500000

0.9 D 167.500000

0.8 E 192.500000

1 E 194.500000

1.2 E 195.500000

DOSE(HERB) Effect Sliced by HERB for RESP

Sum of

HERB DF Squares Mean Square F Value Pr > F

A 2 10.333333 5.166667 0.22 0.8073

B 2 129.000000 64.500000 2.72 0.1061

D 2 103.000000 51.500000 2.17 0.1566

E 2 9.333333 4.666667 0.20 0.8239

The SAS System 12:47 Sunday, February 21, 2016 21

The GLM Procedure

Least Squares Means

T Comparison Lines for Least Squares Means of DOSE(HERB)

LS-means with the same letter are not significantly different.

RESP LSMEAN

LSMEAN DOSE HERB Number

A 207.5 1.2 A 2

A

B A 205.0 1 A 1

B A

B A 204.5 1.3 A 3

B

B C 196.5 0.5 B 5

B C

B C 195.5 1.2 E 12

B C

B C 194.5 1 E 11

C

C 192.5 0.8 E 10

C

D C 187.5 0.6 B 6

D C

D C 186.0 0.4 B 4

D

D E 177.5 0.8 D 8

E

E 171.0 0.7 D 7

E

E 167.5 0.9 D 9

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparison should be used.