```
(ch3-4-blister_MultComp2.out)
/* Number of days until fever blister heals for each of 5 different treatments.
   Treatment 1 is a placebo                                                    */
%LET file_n1 = blister.dat;
 FILENAME file1 URL "http://www.uvm.edu/~rsingle/stat231/data/other/&file_n1";

 DATA a1;
   INFILE file1  FIRSTOBS=2 EXPANDTABS;
   INPUT trt days;
   RUN;

 PROC GLM DATA = a1;
   CLASS trt;
   MODEL  days = trt;
   MEANS trt / DUNNETT('1'); *use TRT 1 as control since it is a placebo;
  *MEANS trt / TUKEY;
  *MEANS trt / LSD;
   MEANS trt / TUKEY   CLDIFF;
   MEANS trt / LSD     CLDIFF;
   RUN;

   QUIT;
_____

Dunnett's t Tests for days

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

Alpha                        0.05
Error Degrees of Freedom       25
Error Mean Square            2.34
Critical Value of Dunnett's t  2.60695
Minimum Significant Difference   2.3024

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

           Difference
   trt      Between      Simultaneous 95%
Comparison   Means     Confidence Limits

  5 - 1      -1.3333     -3.6357   0.9691
  4 - 1      -2.3333     -4.6357  -0.0309  ***
  2 - 1      -2.5000     -4.8024  -0.1976  ***
  3 - 1      -3.1667     -5.4691  -0.8643  ***




The GLM Procedure

Tukey's Studentized Range (HSD) Test for days

NOTE: This test controls the Type I experimentwise error rate.


Alpha                            0.05
Error Degrees of Freedom           25
Error Mean Square                2.34
Critical Value of Studentized Range  4.15337
Minimum Significant Difference      2.5938

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

```
           Difference
   trt      Between      Simultaneous 95%
Comparison   Means     Confidence Limits

  1 - 5       1.3333     -1.2604   3.9271
  1 - 4       2.3333     -0.2604   4.9271
  1 - 2       2.5000     -0.0938   5.0938
  1 - 3       3.1667      0.5729   5.7604   ***
  5 - 1      -1.3333     -3.9271   1.2604
  5 - 4       1.0000     -1.5938   3.5938
  5 - 2       1.1667     -1.4271   3.7604
  5 - 3       1.8333     -0.7604   4.4271
  4 - 1      -2.3333     -4.9271   0.2604
  4 - 5      -1.0000     -3.5938   1.5938
  4 - 2       0.1667     -2.4271   2.7604
  4 - 3       0.8333     -1.7604   3.4271
  2 - 1      -2.5000     -5.0938   0.0938
  2 - 5      -1.1667     -3.7604   1.4271
  2 - 4      -0.1667     -2.7604   2.4271
  2 - 3       0.6667     -1.9271   3.2604
  3 - 1      -3.1667     -5.7604  -0.5729   ***
  3 - 5      -1.8333     -4.4271   0.7604
  3 - 4      -0.8333     -3.4271   1.7604
  3 - 2      -0.6667     -3.2604   1.9271



t Tests (LSD) for days

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

Alpha                        0.05
Error Degrees of Freedom       25
Error Mean Square            2.34
Critical Value of t        2.05954
Least Significant Difference   1.8189

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

           Difference
   trt      Between      95% Confidence
Comparison   Means          Limits

  1 - 5       1.3333     -0.4856   3.1523
  1 - 4       2.3333      0.5144   4.1523   ***
  1 - 2       2.5000      0.6811   4.3189   ***
  1 - 3       3.1667      1.3477   4.9856   ***
  5 - 1      -1.3333     -3.1523   0.4856
  5 - 4       1.0000     -0.8189   2.8189
  5 - 2       1.1667     -0.6523   2.9856
  5 - 3       1.8333      0.0144   3.6523   ***
  4 - 1      -2.3333     -4.1523  -0.5144   ***
  4 - 5      -1.0000     -2.8189   0.8189
  4 - 2       0.1667     -1.6523   1.9856
  4 - 3       0.8333     -0.9856   2.6523
  2 - 1      -2.5000     -4.3189  -0.6811   ***
  2 - 5      -1.1667     -2.9856   0.6523
  2 - 4      -0.1667     -1.9856   1.6523
  2 - 3       0.6667     -1.1523   2.4856
  3 - 1      -3.1667     -4.9856  -1.3477   ***
  3 - 5      -1.8333     -3.6523  -0.0144   ***
  3 - 4      -0.8333     -2.6523   0.9856
  3 - 2      -0.6667     -2.4856   1.1523
```