

Proc GLIMMIX Results

The GLIMMIX Procedure

Model Information	
Data Set	WORK.RCBD
Response Variable	Nitrogen
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix	Not blocked
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
block	4	1 2 3 4
trmt	6	1 2 3 4 5 6

Number of Observations Read	24
Number of Observations Used	24

Dimensions	
G-side Cov. Parameters	1
R-side Cov. Parameters	1
Columns in X	7
Columns in Z	4
Subjects (Blocks in V)	1
Max Obs per Subject	24

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Residual Variance	Profiled
Starting From	Data

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Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	101.56577191	.	2.22E-16

Convergence criterion (ABSGCONV=0.00001) satisfied.

Fit Statistics	
-2 Res Log Likelihood	101.57
AIC (smaller is better)	105.57
AICC (smaller is better)	106.37
BIC (smaller is better)	104.34
CAIC (smaller is better)	106.34
HQIC (smaller is better)	102.87
Generalized Chi-Square	129.61
Gener. Chi-Square / DF	7.20

Covariance Parameter Estimates		
Cov Parm	Estimate	Standard Error
block	9.7446	8.9470
Residual	7.2006	2.6293

Type III Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
trmt	5	15	5.59	0.0042

trmt Least Squares Means							
trmt	Estimate	Standard Error	DF	t Value	Pr > t	Mean	Standard Error Mean
1	38.2775	2.0582	15	18.60	<.0001	38.2775	2.0582
2	44.0325	2.0582	15	21.39	<.0001	44.0325	2.0582
3	46.7700	2.0582	15	22.72	<.0001	46.7700	2.0582
4	40.6150	2.0582	15	19.73	<.0001	40.6150	2.0582
5	39.5100	2.0582	15	19.20	<.0001	39.5100	2.0582
6	43.2250	2.0582	15	21.00	<.0001	43.2250	2.0582

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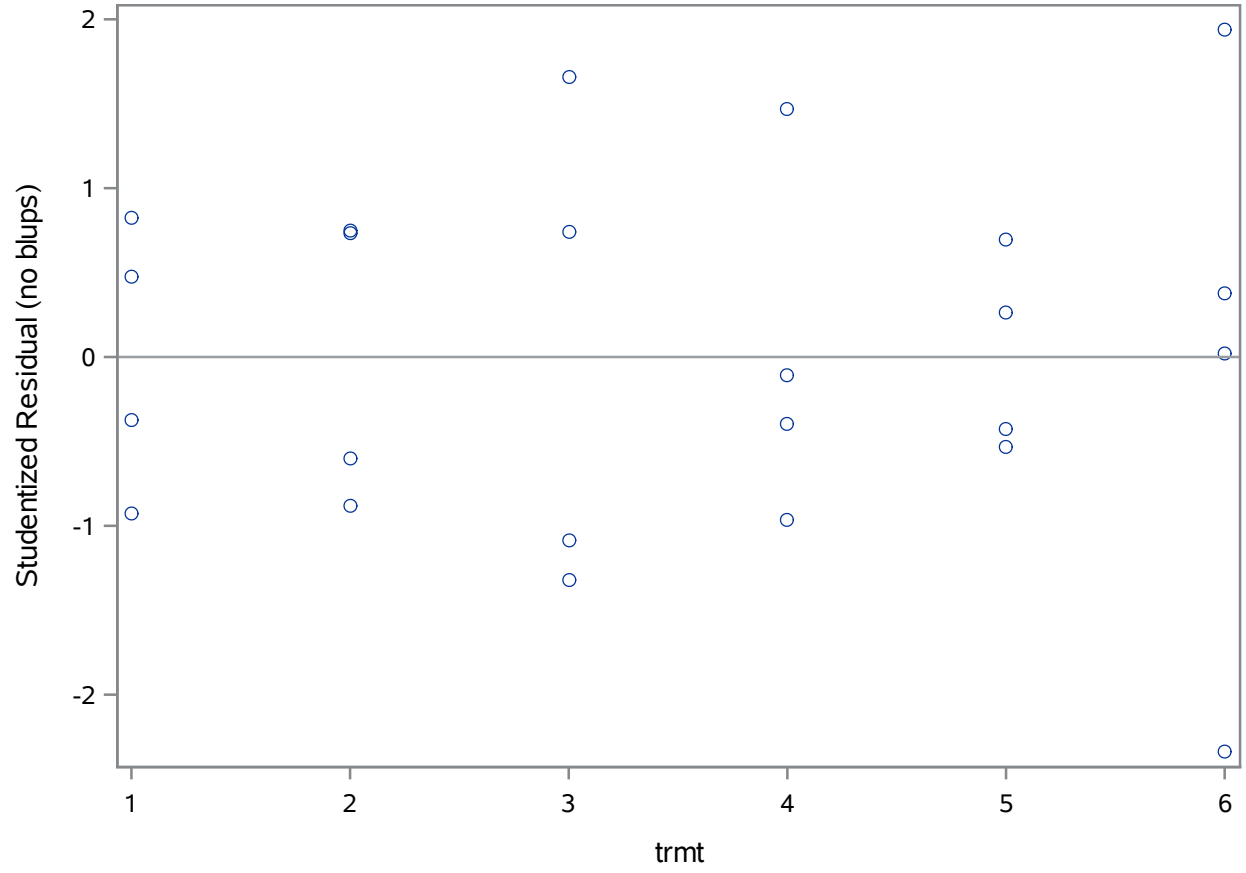
Differences of trmt Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer							
trmt	_trmt	Estimate	Standard Error	DF	t Value	Pr > t	Adj P
1	2	-5.7550	1.8974	15	-3.03	0.0084	0.0742
1	3	-8.4925	1.8974	15	-4.48	0.0004	0.0049
1	4	-2.3375	1.8974	15	-1.23	0.2369	0.8150
1	5	-1.2325	1.8974	15	-0.65	0.5258	0.9849
1	6	-4.9475	1.8974	15	-2.61	0.0198	0.1553
2	3	-2.7375	1.8974	15	-1.44	0.1697	0.7025
2	4	3.4175	1.8974	15	1.80	0.0918	0.4934
2	5	4.5225	1.8974	15	2.38	0.0308	0.2226
2	6	0.8075	1.8974	15	0.43	0.6765	0.9978
3	4	6.1550	1.8974	15	3.24	0.0055	0.0505
3	5	7.2600	1.8974	15	3.83	0.0017	0.0168
3	6	3.5450	1.8974	15	1.87	0.0814	0.4559
4	5	1.1050	1.8974	15	0.58	0.5690	0.9907
4	6	-2.6100	1.8974	15	-1.38	0.1892	0.7402
5	6	-3.7150	1.8974	15	-1.96	0.0691	0.4079

Tukey-Kramer Grouping for trmt Least Squares Means (Alpha=0.05)

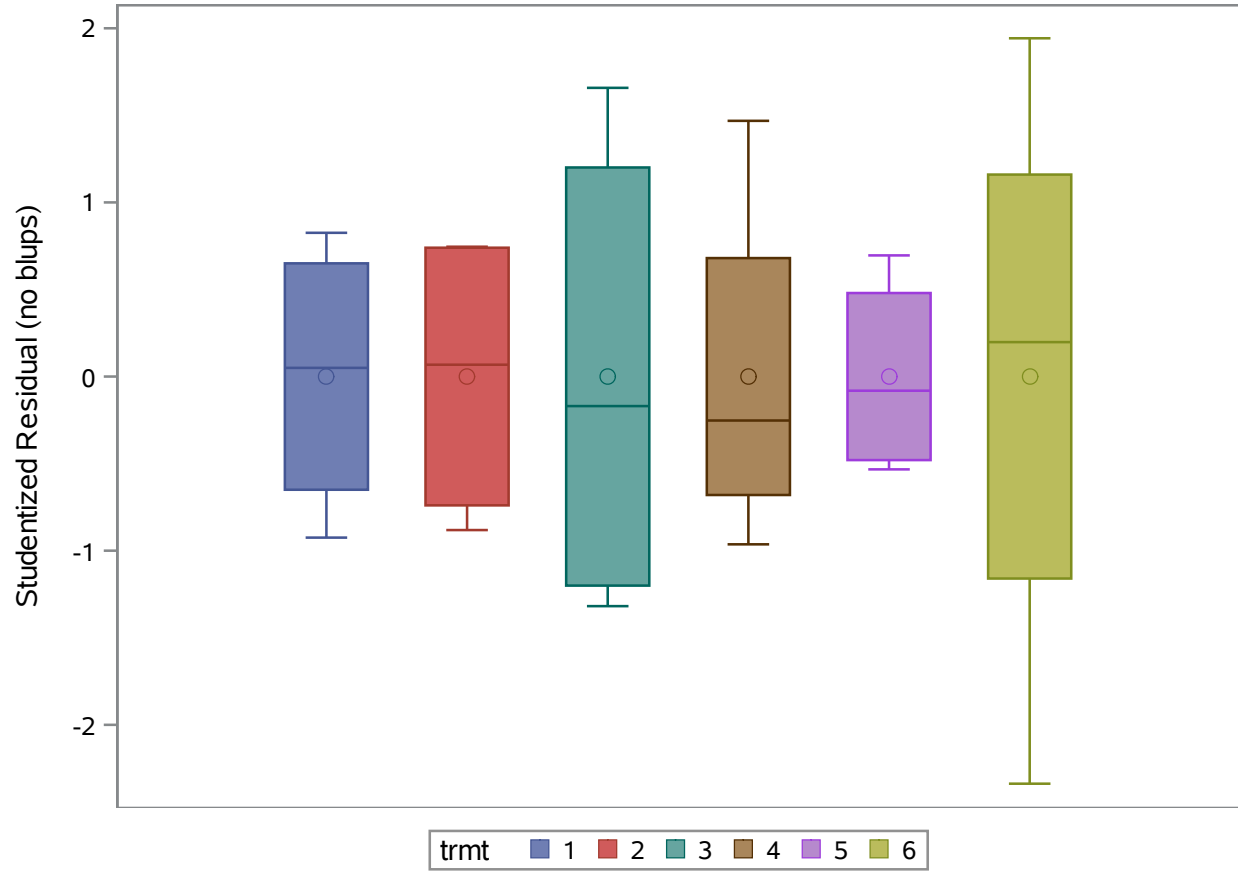
LS-means with the same
letter are not significantly
different.

trmt	Estimate		
3	46.7700		A
			A
2	44.0325	B	A
		B	A
6	43.2250	B	A
		B	A
4	40.6150	B	A
		B	
5	39.5100	B	
		B	
1	38.2775	B	

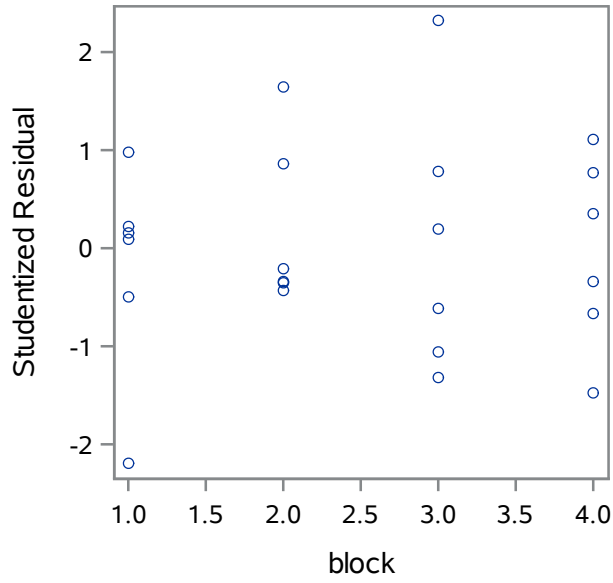
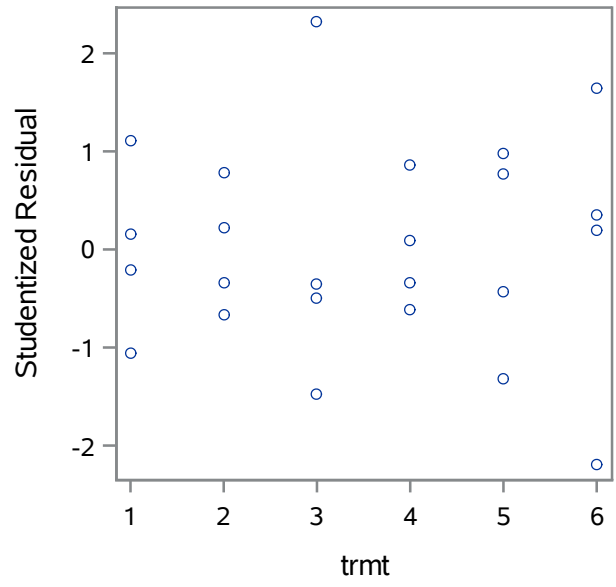
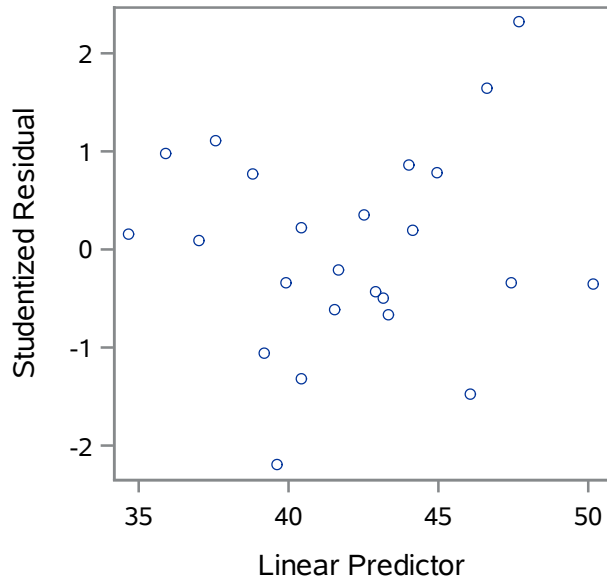
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The UNIVARIATE Procedure Variable: studentresid (Studentized Residual)

Moments			
N	24	Sum Weights	24
Mean	0	Sum Observations	0
Std Deviation	1.02150784	Variance	1.04347826
Skewness	0.12613884	Kurtosis	0.34838415
Uncorrected SS	24	Corrected SS	24
Coeff Variation	.	Std Error Mean	0.20851441

Basic Statistical Measures			
Location		Variability	
Mean	0.00000	Std Deviation	1.02151
Median	-0.06155	Variance	1.04348
Mode	.	Range	4.51955
		Interquartile Range	1.33274

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	0	Pr > t 	1.0000
Sign	M	0	Pr >= M 	1.0000
Signed Rank	S	-3	Pr >= S 	0.9338

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.988531	Pr < W	0.9916
Kolmogorov-Smirnov	D	0.089759	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.032838	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.191551	Pr > A-Sq	>0.2500

Quantiles (Definition 5)	
Level	Quantile
100% Max	2.3233687
99%	2.3233687
95%	1.6452580
90%	1.1151230
75% Q3	0.7761524
50% Median	-0.0615464
25% Q1	-0.5565866

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The UNIVARIATE Procedure
 Variable: studentresid (Studentized Residual)

Quantiles (Definition 5)	
Level	Quantile
10%	-1.3184409
5%	-1.4740124
1%	-2.1961817
0% Min	-2.1961817

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
-2.196182	21	0.857210	14
-1.474012	12	0.981659	17
-1.318441	19	1.115123	4
-1.056147	3	1.645258	22
-0.668478	8	2.323369	11

```

Stem Leaf          #          Boxplot
  2 3                1          |
  1 6                1          |
  1 01              2          |
  0 889             3          +-----+
  0 12224           5          | + |
 -0 43332           5          *-----*
 -0 765             3          +-----+
 -1 31              2          |
 -1 5               1          |
 -2 2              1          |
-----+-----+-----+
  
```

