

Batch	Sample	Test	QualChar
1	1	1	15.5
1	1	2	15
1	2	1	15.8
1	2	2	15.2
1	3	1	14
1	3	2	14.5
2	1	1	15.4
2	1	2	14.8
2	2	1	13.9
2	2	2	13.3
2	3	1	13.4
2	3	2	14.7
3	1	1	12.9
3	1	2	12.3
3	2	1	13.5
3	2	2	13.8
3	3	1	14.9
3	3	2	15.7
4	1	1	11.6
4	1	2	11.3
4	2	1	12.1
4	2	2	12.5
4	3	1	13.1
4	3	2	13.5

Model Specification

Personality: **Standard Least Squares**
 Emphasis: **Minimal Report**
 Method: **EMS (Tradiational)**

Response: **QualChar**

Construct Model Effects:

Batch&Random
Sample[Batch]&Random

Summary of Fit

RSquare	0.939979
RSquare Adj	0.88496
Root Mean Square Error	0.445814
Mean of Response	13.8625
Observations (or Sum Wgts)	24

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	11	37.351250	3.39557	17.0846
Error	12	2.385000	0.19875	Prob > F
C. Total	23	39.736250		<.0001

Expected Mean Squares

The Mean Square per row by the Variance Component per column plus 1.0 times Residual Error Variance

EMS	Intercept	Batch&Random	Sample[Batch]&Random
Intercept	0	0	0
Batch&Random	0	6	2
Sample[Batch]&Random	0	0	2

Sample[Batch]&
Random

Variance Component Estimates

Component	Var Comp Est	Percent of Total
Batch&Random	0.932292	47.405
Sample[Batch]&Random	0.835625	42.489
Residual	0.19875	10.106
Total	1.966667	100.000

These estimates based on equating Mean Squares to Expected Value.