The SAS System

The GLM Procedure

Class Level Information		
Class	Levels	Values
batch	10	1 2 3 4 5 6 7 8 9 10

Number of Observations Read	50
Number of Observations Used	50

The SAS System

The GLM Procedure

Dependent Variable: percent_value

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	51.6430000	5.7381111	1.26	0.2889
Error	40	182.3380000	4.5584500		
Corrected Total	49	233.9810000			

R-Square	Coeff Var	Root MSE	percent_value Mean
0.220715	40.72973	2.135053	5.242000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
batch	9	51.64300000	5.73811111	1.26	0.2889

Source	DF	Type III SS	Mean Square	F Value	Pr > F
batch	9	51.64300000	5.73811111	1.26	0.2889
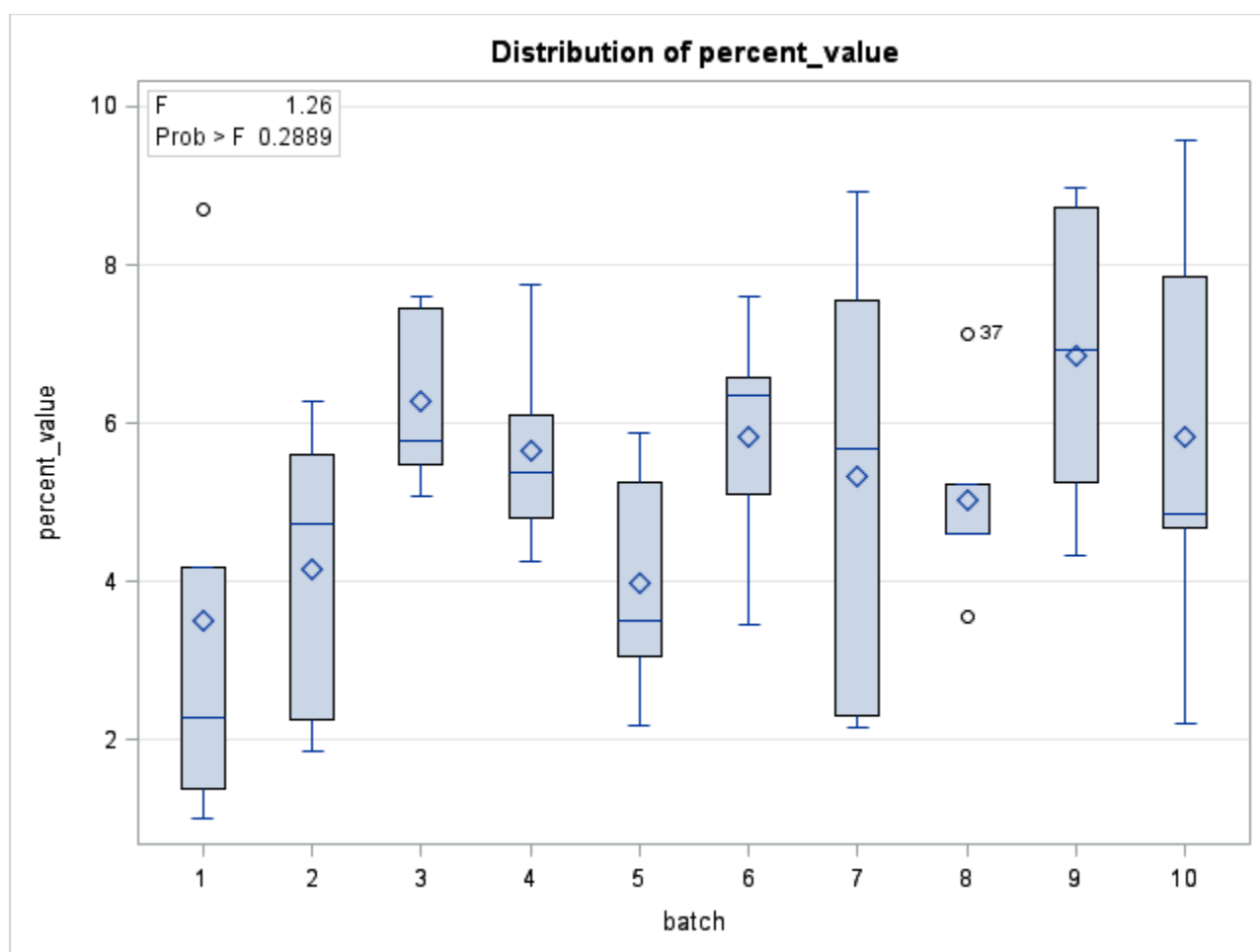
The SAS System

The GLM Procedure

Source	Type III Expected Mean Square
batch	Var(Error) + 5 Var(batch)

The SAS System

The Mixed Procedure

Model Information	
Data Set	WORK.PAINT_DATA
Dependent Variable	percent_value
Covariance Structure	Variance Components
Estimation Method	Type 3
Residual Variance Method	Factor
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information		
Class	Levels	Values
batch	10	1 2 3 4 5 6 7 8 9 10

Dimensions	
Covariance Parameters	2
Columns in X	1
Columns in Z	10
Subjects	1
Max Obs Per Subject	50

Number of Observations	
Number of Observations Read	50
Number of Observations Used	50
Number of Observations Not Used	0

Type 3 Analysis of Variance								
Source	DF	Sum of Squares	Mean Square	Expected Mean Square	Error Term	Error DF	F Value	Pr > F
batch	9	51.643000	5.738111	Var(Residual) + 5 Var(batch)	MS(Residual)	40	1.26	0.2889
Residual	40	182.338000	4.558450	Var(Residual)	.	.	.	.

Covariance Parameter Estimates	
Cov Parm	Estimate
batch	0.2359
Residual	4.5584

Fit Statistics	
-2 Res Log Likelihood	219.4
AIC (smaller is better)	223.4
AICC (smaller is better)	223.6
BIC (smaller is better)	224.0

The SAS System

The Mixed Procedure

Model Information

Data Set	WORK.PAINT_DATA
Dependent Variable	percent_value
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
batch	10	1 2 3 4 5 6 7 8 9 10

Dimensions

Covariance Parameters	2
Columns in X	1
Columns in Z	10
Subjects	1
Max Obs Per Subject	50

Number of Observations

Number of Observations Read	50
Number of Observations Used	50
Number of Observations Not Used	0

Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	219.57556051	
1	1	219.37147613	0.00000000

Convergence criteria met.

Covariance Parameter Estimates

Cov Parm	Estimate
batch	0.2359
Residual	4.5584

Fit Statistics

-2 Res Log Likelihood	219.4
AIC (smaller is better)	223.4
AICC (smaller is better)	223.6

Fit Statistics	
BIC (smaller is better)	224.0

			Estimates					
Label	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
Avg. fade	5.2420	0.3388	9	15.47	<.0001	0.05	4.4757	6.0083