

The SAS System

The Mixed Procedure

Model Information	
Data Set	WORK.FIRE_ANT_KILLER
Dependent Variable	kill_count
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
chemical	4	1 2 3 4
location	5	1 2 3 4 5

Dimensions	
Covariance Parameters	4
Columns in X	1
Columns in Z	29
Subjects	1
Max Obs Per Subject	40

Number of Observations	
Number of Observations Read	40
Number of Observations Used	40
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
chemical	3	180.132750	60.044250	Var(Residual) + 2 Var (chemical*location) + 10 Var (chemical)	MS (chemical*location)	12	44.59	<.0001
location	4	3.811500	0.952875	Var(Residual) + 2 Var (chemical*location) + 8 Var (location)	MS (chemical*location)	12	0.71	0.6020
chemical*location	12	16.158500	1.346542	Var(Residual) + 2 Var (chemical*location)	MS(Residual)	20	3.89	0.0037
Residual	20	6.925000	0.346250	Var(Residual)

Covariance Parameter Estimates	
Cov Parm	Estimate
chemical	5.8698
location	-0.04921

Covariance Parameter Estimates	
Cov Parm	Estimate
chemical*location	0.5001
Residual	0.3462

Fit Statistics	
-2 Res Log Likelihood	108.8
AIC (smaller is better)	116.8
AICC (smaller is better)	118.0
BIC (smaller is better)	114.4

The SAS System

The Mixed Procedure

Model Information	
Data Set	WORK.FIRE_ANT_KILLER
Dependent Variable	kill_count
Covariance Structure	Diagonal
Estimation Method	Type 3
Residual Variance Method	Factor
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Residual

Class Level Information		
Class	Levels	Values
chemical	4	1 2 3 4
location	5	1 2 3 4 5

Dimensions	
Covariance Parameters	1
Columns in X	30
Columns in Z	0
Subjects	1
Max Obs Per Subject	40

Number of Observations	
Number of Observations Read	40
Number of Observations Used	40
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
chemical	3	180.132750	60.044250	Var(Residual) + Q (chemical,chemical*location)	MS (Residual)	20	173.41	<.0001
location	4	3.811500	0.952875	Var(Residual) + Q (location,chemical*location)	MS (Residual)	20	2.75	0.0567
chemical*location	12	16.158500	1.346542	Var(Residual) + Q(chemical*location)	MS (Residual)	20	3.89	0.0037
Residual	20	6.925000	0.346250	Var(Residual)

Covariance Parameter Estimates	
Cov Parm	Estimate
Residual	0.3462

Fit Statistics	

Fit Statistics	
-2 Res Log Likelihood	49.4
AIC (smaller is better)	51.4
AICC (smaller is better)	51.6
BIC (smaller is better)	52.4

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
chemical	3	20	173.41	<.0001
location	4	20	2.75	0.0567
chemical*location	12	20	3.89	0.0037