

Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
Material	1	Material tipe 1	12
	2	Material tipe 2	12
	3	Material Tipe 3	12
Temperatur	1	15F	12
	2	70F	12
	3	125F	12

Tests of Between-Subjects Effects

Dependent Variable: Daya

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	400900.028	1	400900.028	17.820	.036
	Error	55011.886	2.445	22497.778 ^a		
Material	Hypothesis	10683.722	2	5341.861	2.223	.224
	Error	9613.778	4	2403.444 ^b		
Temperatur	Hypothesis	39118.722	2	19559.361	8.138	.039
	Error	9613.778	4	2403.444 ^b		
Material * Temperatur	Hypothesis	9613.778	4	2403.444	3.560	.019
	Error	18230.750	27	675.213 ^c		

a. $MS(\text{Material}) + MS(\text{Temperatur}) - MS(\text{Material} * \text{Temperatur})$

b. $MS(\text{Material} * \text{Temperatur})$

c. $MS(\text{Error})$

Expected Mean Squares^{a,b}

Source	Variance Component				
	Var(Material)	Var (Temperatur)	Var(Material * Temperatur)	Var(Error)	Quadratic Term
Intercept	12.000	12.000	4.000	1.000	Intercept
Material	12.000	.000	4.000	1.000	
Temperatur	.000	12.000	4.000	1.000	
Material * Temperatur	.000	.000	4.000	1.000	
Error	.000	.000	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

GET

FILE='D:\Google Drive\ELEX_2016\CD\Bab 3\3.4.sav'.

DATASET NAME DataSet1 WINDOW=FRONT.

UNIANOVA Daya BY Material Temperatur

/RANDOM=Material Temperatur

/METHOD=SSTYPE(3)

/INTERCEPT=EXCLUDE

/CRITERIA=ALPHA(0.05)

/DESIGN=Material Temperatur Material*Temperatur

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[DataSet1] D:\Google Drive\ELEX_2016\CD\Bab 3\3.4.sav

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	Error	18230.750	27	675.213 ^b		

a. MS(Material * Temperatur)

b. MS(Error)

Expected Mean Squares^{a,b}

Source	Variance Component			
	Var(Material)	Var (Temperatur)	Var(Material * Temperatur)	Var(Error)
Material	12.000	.000	4.000	1.000
Temperatur	.000	12.000	4.000	1.000
Material * Temperatur	.000	.000	4.000	1.000
Error	.000	.000	.000	1.000

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.