

Supplementary file

Table S1. Variance analysis for the regression model.

Source	Sum of squares	Degree of freedom	Mean squares	F Value	p Value
Model	42.03	14	3.00	34.21	<0.0001**
X ₁	1.39	1	1.39	15.81	0.0014**
X ₂	0.75	1	0.75	8.49	0.0113*
X ₃	0.31	1	0.31	3.54	0.0810
X ₄	17.96	1	17.96	204.62	<0.0001**
X ₁ X ₂	0.25	1	0.25	2.85	0.1136
X ₁ X ₃	0.46	1	0.46	5.27	0.0377*
X ₁ X ₄	4.00 × 10 ⁻⁴	1	4.00 × 10 ⁻⁴	4.56 × 10 ⁻³	0.9471
X ₂ X ₃	0.69	1	0.69	7.85	0.0141*
X ₂ X ₄	0.018	1	0.018	0.21	0.6556
X ₃ X ₄	0.18	1	0.18	2.06	0.1734
X ₁ ²	3.61	1	3.61	41.15	<0.0001**
X ₂ ²	6.81	1	6.81	77.64	<0.0001**
X ₃ ²	4.71	1	4.71	53.70	<0.0001**
X ₄ ²	14.33	1	14.33	163.24	<0.0001**
Residual	1.23	14	0.088		
Lack of Fit	1.15	10	0.11	5.81	0.0523
Pure Error	0.079	4	0.020		
Total variation	43.26	28			
Standard deviation	0.30	Coefficient of determination (R ²)		0.9716	
Adjusted R ²	0.9432	Precision		19.013	

* Significant ($p < 0.05$), ** Extremely significant ($p < 0.01$).