

## TÀI LIỆU KHAM KHẢO

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# PHỤ LỤC

## 1) Kiểm tra sự tương thích của các phương trình hấp phụ đẳng nhiệt bằng SPSS

### a) Freundlich

Parameter Estimates

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
KF	1.342	.225	.626	2.059
nF	3.397	.684	1.220	5.573

ANOVA<sup>a</sup>

Source	Sum of Squares	df	Mean Squares
Regression	39.095	2	19.548
Residual	.237	3	.079
Uncorrected Total	39.332	5	
Corrected Total	3.132	4	

Dependent variable: q

a. R squared =  $1 - (\text{Residual Sum of Squares}) / (\text{Corrected Sum of Squares}) = .924$ .

### b) Langmuir

Parameter Estimates

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
qm	3.572	.479	2.049	5.096
KL	.423	.297	-.523	1.368

ANOVA<sup>a</sup>

Source	Sum of Squares	df	Mean Squares
Regression	38.609	2	19.305
Residual	.723	3	.241

Uncorrected Total	39.332	5
Corrected Total	3.132	4

Dependent variable: q

a. R squared = 1 - (Residual Sum of Squares) / (Corrected Sum of Squares) = .769.

### c) Koble – Corrigan

**Parameter Estimates**

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
qm	20.333	33374611282 793376.000	- 42406464394 9418110.000	42406464394 9418110.000
aKC	.050	81334332208 944.940	- 10334506771 26900.900	10334506771 26901.000
bKC	-.282	2.934	-37.566	37.002
nKC	.174	.945	-11.835	12.182

**ANOVA<sup>a</sup>**

Source	Sum of Squares	df	Mean Squares
Regression	39.107	4	9.777
Residual	.225	1	.225
Uncorrected Total	39.332	5	
Corrected Total	3.132	4	

Dependent variable: q

a. R squared = 1 - (Residual Sum of Squares) / (Corrected Sum of Squares) = .928.

## 2) Kiểm tra sự tương thích của các mô hình động học hấp phụ

### a) Mô hình biểu kiến bậc 1

**Parameter Estimates**

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound

k1	.233	.011	.205	.261
qe	2.301	.009	2.278	2.324

**ANOVA<sup>a</sup>**

Source	Sum of Squares	df	Mean Squares
Regression	41.261	2	20.630
Residual	.003	6	.001
Uncorrected Total	41.264	8	
Corrected Total	.047	7	

Dependent variable: q

a. R squared = 1 - (Residual Sum of Squares) / (Corrected Sum of Squares) = .928.

**b) Biểu kiến bậc 2**

**Parameter Estimates**

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
qe	2.338	.023	2.282	2.395
k2	.414	.108	.149	.679

**ANOVA<sup>a</sup>**

Source	Sum of Squares	df	Mean Squares
Regression	41.253	2	20.626
Residual	.012	6	.002
Uncorrected Total	41.264	8	
Corrected Total	.047	7	

Dependent variable: q

a. R squared = 1 - (Residual Sum of Squares) / (Corrected Sum of Squares) = .752.

**c) Khuếch tán trong**

**Parameter Estimates**

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
k3	.010	.006	-.006	.026
a	2.187	.061	2.038	2.335

**ANOVA<sup>a</sup>**

Source	Sum of Squares	df	Mean Squares
Regression	41.230	2	20.615
Residual	.034	6	.006
Uncorrected Total	41.264	8	
Corrected Total	.047	7	

Dependent variable: q

a. R squared =  $1 - (\text{Residual Sum of Squares}) / (\text{Corrected Sum of Squares}) = .281$ .