

The logo of Universitas Katolik Widya Mandala Surabaya is a large, faint watermark in the background. It features a shield with a yellow and red cross, a central sunburst, an open book on a globe, and a banner at the bottom with the text 'UNIVERSITAS KATOLIK WIDYA MANDALA SURABAYA'.

LAMPIRAN

LAMPIRAN A

PERHITUNGAN *MOISTURE CONTENT* (MC)

Formula -1			
W (g)	Wp (g)	Wa (g)	MC (%)
0,2298	0,2204	0,0094	4,26
0,2375	0,2286	0,0089	3,89
0,2308	0,2210	0,0098	4,43
Rata-rata			4,19 ± 0,28

Formula a			
W (g)	Wp (g)	Wa (g)	MC (%)
0,7386	0,7003	0,0383	5,47
0,7498	0,7121	0,0377	5,29
0,7802	0,7386	0,0416	5,63
Rata-rata			5,46 ± 0,17

Formula b			
W (g)	Wp (g)	Wa (g)	MC (%)
0,4464	0,4286	0,0178	4,15
0,5827	0,5601	0,0226	4,03
0,4847	0,4613	0,0234	5,07
Rata-rata			4,42 ± 0,56

Formula ab			
W (g)	Wp (g)	Wa (g)	MC (%)
1,0021	0,9427	0,0594	6,30
1,1940	1,1235	0,0705	6,28
1,0091	0,9421	0,0670	7,11
Rata-rata			6,56 ± 0,47

Keterangan :

W = Berat mula-mula

Wp = Berat kering (setelah dioven 100 ± 2 °C selama 6 jam)

Wa = Selisih antara W dan Wp

$$MC = \frac{W_a}{W_p} \times 100\%$$

LAMPIRAN B

PERHITUNGAN STATISTIK UNTUK MENGETAHUI PERBEDAAN BERMAKNA ANTAR PERSAMAAN REGRESI

Data kurva baku propranolol HCl dalam larutan dapar fosfat pH 7,4
pengujian 1

Konsentrasi ($\mu\text{g/mL}$)	Serapan (A)	X^2	Y^2	XY
5,06	0,129	25,6036	0,0166	0,6527
15,18	0,423	230,4324	0,1789	6,4211
25,3	0,609	640,09	0,3709	15,4077
35,42	0,811	1254,5764	0,6577	28,7256
45,54	1,029	2073,8916	1,0588	46,8607
		$\Sigma = 4224,594$	$\Sigma = 2,2830$	$\Sigma = 98,0679$

Data kurva baku propranolol HCl dalam larutan dapar fosfat pH 7,4
pengujian 2

Konsentrasi ($\mu\text{g/mL}$)	Serapan (A)	X^2	Y^2	XY
5,04	0,114	25,4016	0,0130	0,5746
15,12	0,334	228,6144	0,1116	5,0501
25,2	0,614	635,0400	0,3770	15,4728
35,28	0,838	1244,6784	0,7022	29,5646
45,36	1,02	2057,5296	1,0404	46,2672
		$\Sigma = 4191,2640$	$\Sigma = 2,2442$	$\Sigma = 96,9293$

Data kurva baku propranolol HCl dalam larutan dapar fosfat pH 7,4
pengujian 3

Konsentrasi (µg/mL)	Serapan (A)	X ²	Y ²	XY
5,03	0,119	25,3009	0,014161	0,59857
15,09	0,458	227,7081	0,209764	6,91122
25,15	0,632	632,5225	0,399424	15,8948
35,21	0,815	1239,7441	0,664225	28,69615
45,27	1,03	2049,3729	1,0609	46,6281
		Σ = 4174,6485	Σ = 2,348474	Σ = 98,72884

	Σ X ²	Σ XY	Σ Y ²	N	SSi	RDF
Regresi I	4224,594	98,0679	2,2830	5	0,0065	4
Regresi II	4191,264	96,9293	2,2442	5	0,0026	4
Regresi III	4174,6485	98,72884	2,348474	5	0,0136	4
	12590,5065	293,7260	6,8757			

$$SSc = \Sigma Yc - [(\Sigma XYc)^2 / \Sigma Xc]$$

$$= 6,8757 - (293,7260^2 / 12590,5065) = 0,0233$$

$$SSp = SS1 + SS2 + SS3$$

$$= 0,0065 + 0,0026 + 0,0136 = 0,0226$$

$$F = (SSc - SSp / k - 1) / (SSp / 12)$$

$$= (0,0233 - 0,0226) / (3 - 1) / (0,0226 : 12) = 0,1742$$

$$F_{hitung} < F_{tabel} \quad 0,05 (2;12) = 3,89$$

LAMPIRAN C

PERHITUNGAN AKURASI DAN PRESISI

Konsetrasi	Uji	Serapan	Kadar teoritis	Kadar teramati	% perolehan kembali
Kadar 100% (25,2 ppm)	1	0,585	25,20	25,24	100,16
	2	0,584	25,20	25,20	100,00
	3	0,589	25,20	25,42	100,87
	4	0,584	25,20	25,20	100,00
	5	0,583	25,20	25,16	99,84
	6	0,581	25,20	25,06	99,44
				Rata-rata	100,05
				SD	0,47
				KV	0,47

Contoh perhitungan :

Dari hasil serapan dimasukkan ke dalam persamaan kurva baku terpilih yaitu

$$y = 0,005 + 0,0229x$$

Dimana:

y = Serapan

x = Konsetrasi teramati

Kemudian Hitung % perolehan kembali dengan rumus :

$$\% \text{ perolehan kembali} = \frac{\text{Kadar teramati}}{\text{kadar teoritis}} \times 100\%$$

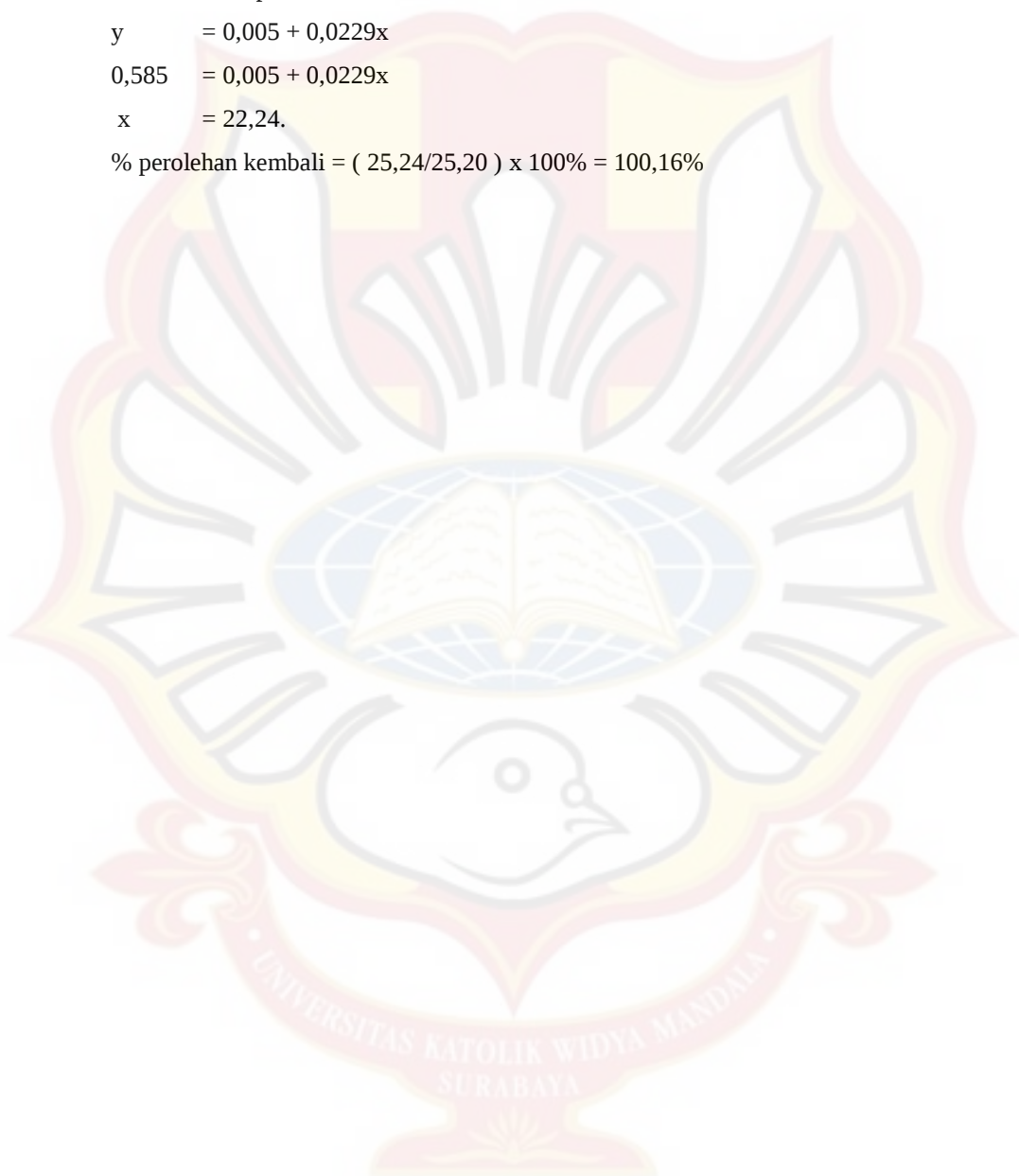
Misal : data replikasi 1

$$y = 0,005 + 0,0229x$$

$$0,585 = 0,005 + 0,0229x$$

$$x = 22,24.$$

$$\% \text{ perolehan kembali} = (25,24/25,20) \times 100\% = 100,16\%$$



LAMPIRAN D
PERHITUNGAN LOD DAN LOQ

Konsentrasi (µg/mL) x	Serapan (A) y	yi	y - yi	(y - yi) ²
5,04	0,114	0,1204	0,0064	0,0000
15,12	0,334	0,3512	0,0172	0,0003
25,2	0,614	0,5821	-0,0319	0,0010
35,28	0,838	0,8129	-0,0251	0,0006
45,36	1,02	1,0437	0,0237	0,0006
$\Sigma (y - yi)^2 =$				0,0026

Dari konsentrasi (x) dan serapan (y) setelah dimasukkan dalam regresi linear akan menghasilkan persamaan $y = 0,005 + 0,0229x$

Kemudian dari persamaan tersebut konsentrasi (x) dimasukkan kembali ke dalam persamaan di atas sehingga menghasilkan yi

$$\frac{Sy}{x} = Sb = \sqrt{\frac{\Sigma (y - yi)^2}{n - 2}} = \sqrt{\frac{0,0026}{3}} = 0,0294$$

b = slope dari persamaan di atas

$$LOD = 3Sb/b = 3,85 \text{ µg/mL}$$

$$LOQ = 10Sb/b = 12,84 \text{ µg/mL}$$

LAMPIRAN E

DATA PELEPASAN PROPRANOLOL HCL

Pelepasan Formula (-1)

Waktu t (jam)	Akar Waktu	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
		Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.5	0.189	0.176	0.196	8.03	7.47	8.34	7.95	0.44
0.5	0.707	0.235	0.225	0.229	10.04	9.61	9.78	9.81	0.22
0.75	0.866	0.291	0.304	0.311	12.49	13.06	13.36	12.97	0.44
1	1	0.326	0.347	0.348	14.02	14.93	14.98	14.64	0.54
1.5	1.225	0.452	0.459	0.461	19.52	19.83	19.91	19.75	0.21
2	1.414	0.506	0.518	0.528	21.88	22.40	22.84	22.37	0.48
2.5	1.581	0.579	0.611	0.623	25.07	26.46	26.99	26.17	0.99
3	1.732	0.692	0.689	0.702	30.00	29.87	30.44	30.10	0.30
4	2	0.743	0.759	0.760	32.23	32.93	32.97	32.71	0.42
5	2.236	0.822	0.883	0.881	35.68	38.34	38.25	37.42	1.51
6	2.449	0.958	0.975	0.986	41.62	42.36	42.84	42.27	0.62

Pelepasan Formula (a)

Waktu t (jam)	Akar Waktu	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
		Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.5	0.259	0.259	0.267	11.09	11.09	11.44	11.21	0.20
0.5	0.707	0.323	0.333	0.315	13.89	14.32	13.54	13.92	0.39
0.75	0.866	0.434	0.458	0.413	18.73	19.78	17.82	18.78	0.98
1	1	0.523	0.514	0.533	22.62	22.23	23.06	22.63	0.42
1.5	1.225	0.601	0.559	0.612	26.03	24.19	26.51	25.57	1.22
2	1.414	0.675	0.666	0.686	29.26	28.86	29.74	29.29	0.44
2.5	1.581	0.743	0.758	0.736	32.23	32.88	31.92	32.34	0.49
3	1.732	0.860	0.877	0.852	37.34	38.08	36.99	37.47	0.56
4	2	0.901	0.91	0.896	39.13	39.52	38.91	39.18	0.31
5	2.236	1.043	1.058	1.022	45.33	45.98	44.41	45.24	0.79
6	2.449	1.187	1.196	1.195	51.62	52.01	51.97	51.86	0.22

Pelepasan Formula (b)

Waktu t (jam)	Akar Waktu	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
		Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.5	0.255	0.234	0.241	10.92	10.00	10.31	10.41	0.47
0.5	0.707	0.305	0.313	0.316	13.10	13.45	13.58	13.38	0.25
0.75	0.866	0.417	0.427	0.428	17.99	18.43	18.47	18.30	0.27
1	1	0.504	0.519	0.521	21.79	22.45	22.53	22.26	0.41
1.5	1.225	0.591	0.601	0.689	25.59	26.03	29.87	27.16	2.35
2	1.414	0.648	0.633	0.635	28.08	27.42	27.51	27.67	0.36
2.5	1.581	0.732	0.723	0.727	31.75	31.35	31.53	31.54	0.20
3	1.732	0.865	0.872	0.864	37.55	37.86	37.51	37.64	0.19
4	2	0.922	0.906	0.914	40.04	39.34	39.69	39.69	0.35
5	2.236	0.986	0.972	0.987	42.84	42.23	42.88	42.65	0.37
6	2.449	1.105	1.093	1.111	48.03	47.51	48.30	47.95	0.40

Pelepasan Formula (ab)

Waktu t (jam)	Akar Waktu	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
		Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.5	0.274	0.263	0.269	11.75	11.27	11.53	11.51	0.24
0.5	0.707	0.335	0.356	0.351	14.41	15.33	15.11	14.95	0.48
0.75	0.866	0.448	0.467	0.459	19.34	20.17	19.83	19.78	0.42
1	1	0.586	0.592	0.579	25.37	25.63	25.07	25.36	0.28
1.5	1.225	0.645	0.652	0.639	27.95	28.25	27.69	27.96	0.28
2	1.414	0.758	0.777	0.773	32.88	33.71	33.54	33.38	0.44
2.5	1.581	0.815	0.829	0.811	35.37	35.98	35.20	35.52	0.41
3	1.732	0.932	0.946	0.954	40.48	41.09	41.44	41.00	0.49
4	2	1.056	1.099	1.104	45.90	47.77	47.99	47.22	1.15
5	2.236	1.109	1.132	1.142	48.21	49.21	49.65	49.02	0.74
6	2.449	1.214	1.245	1.232	52.79	54.15	53.58	53.51	0.68

LAMPIRAN F
DATA PENETRASI PROPRANOLOL HCL
Penetrasi Formula (-1)

Waktu t (jam)	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
	Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.211	0.218	0.209	9.00	9.30	8.91	9.07	0.21
0.5	0.360	0.356	0.350	15.50	15.33	15.07	15.30	0.22
0.75	0.374	0.391	0.385	16.11	16.86	16.59	16.52	0.38
1	0.406	0.411	0.401	17.51	17.73	17.29	17.51	0.22
1.5	0.418	0.428	0.424	18.03	18.47	18.30	18.27	0.22
2	0.422	0.432	0.416	18.21	18.65	17.95	18.27	0.35
2.5	0.439	0.435	0.430	18.95	18.78	18.56	18.76	0.20
3	0.456	0.465	0.449	19.69	20.09	19.39	19.72	0.35
4	0.501	0.492	0.487	21.66	21.27	21.05	21.32	0.31
5	0.521	0.543	0.538	22.53	23.49	23.28	23.10	0.50
6	0.556	0.545	0.558	24.06	23.58	24.15	23.93	0.31

Penetrasi Formula (a)

Waktu t (jam)	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
	Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.231	0.227	0.237	9.87	9.69	10.13	9.90	0.22
0.5	0.394	0.384	0.391	16.99	16.55	16.86	16.80	0.22
0.75	0.414	0.423	0.412	17.86	18.25	17.77	17.96	0.26
1	0.436	0.453	0.432	18.82	19.56	18.65	19.01	0.49
1.5	0.441	0.440	0.451	19.04	19.00	19.48	19.17	0.27
2	0.468	0.472	0.452	20.22	20.39	19.52	20.04	0.46
2.5	0.481	0.492	0.476	20.79	21.27	20.57	20.87	0.36
3	0.512	0.525	0.532	22.14	22.71	23.01	22.62	0.44
4	0.526	0.534	0.538	22.75	23.10	23.28	23.04	0.27
5	0.531	0.542	0.537	22.97	23.45	23.23	23.22	0.24
6	0.567	0.561	0.672	24.54	24.28	29.13	25.98	2.73

Penetrasi Formula (b)

Waktu t (jam)	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
	Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.252	0.245	0.243	10.79	10.48	10.39	10.55	0.21
0.5	0.391	0.388	0.399	16.86	16.72	17.21	16.93	0.25
0.75	0.422	0.432	0.427	18.21	18.65	18.43	18.43	0.22
1	0.439	0.445	0.440	18.95	19.21	19.00	19.05	0.14
1.5	0.473	0.485	0.487	20.44	20.96	21.05	20.82	0.33
2	0.489	0.493	0.496	21.14	21.31	21.44	21.30	0.15
2.5	0.494	0.498	0.495	21.35	21.53	21.40	21.43	0.09
3	0.524	0.532	0.528	22.66	23.01	22.84	22.84	0.17
4	0.567	0.572	0.568	24.54	24.76	24.59	24.63	0.12
5	0.598	0.589	0.583	25.90	25.50	25.24	25.55	0.33
6	0.624	0.633	0.627	27.03	27.42	27.16	27.21	0.20

Penetrasi Formula (ab)

Waktu t (jam)	Serapan			Konsentrasi (ppm)			Rata-rata Konsentrasi	St Dev
	Replikasi 1	Replikasi 2	Replikasi 3	Replikasi 1	Replikasi 2	Replikasi 3		
0.25	0.258	0.262	0.270	11.05	11.22	11.57	11.28	0.27
0.5	0.388	0.391	0.401	16.72	16.86	17.29	16.96	0.30
0.75	0.432	0.439	0.452	18.65	18.95	19.52	19.04	0.44
1	0.468	0.472	0.461	20.22	20.39	19.91	20.17	0.24
1.5	0.492	0.497	0.489	21.27	21.48	21.14	21.30	0.18
2	0.517	0.523	0.518	22.36	22.62	22.40	22.46	0.14
2.5	0.538	0.546	0.532	23.28	23.62	23.01	23.30	0.31
3	0.561	0.574	0.567	24.28	24.85	24.54	24.56	0.28
4	0.598	0.583	0.574	25.90	25.24	24.85	25.33	0.53
5	0.646	0.657	0.653	27.99	28.47	28.30	28.25	0.24
6	0.671	0.679	0.685	29.08	29.43	29.69	29.40	0.31

LAMPIRAN G

HASIL UJI ANOVA PELEPASAN PROPRANOLOL HCL DENGAN DESAIN FAKTORIAL

Response 1 Pelepasan

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	pvalue Prob > F	
Model	27.47	3	9.16	77.37	< 0.0001	significant
<i>A-Eudragit RL-100</i>	20.46	1	20.46	172.89	< 0.0001	
<i>B-Propilen Glikol</i>	6.56	1	6.56	55.39	< 0.0001	
AB	0,45	1	0,45	3,82	0.0863	
Pure Error	0.95	8	0.12			
Cor Total	28.42	11				

The Model F-value of 77.37 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case A, B are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.34	R-Squared	0.9667
Mean	19.80	Adj R-Squared	0.9542
C.V. %	1.74	Pred R-Squared	0.9250
PRESS	2.13	Adeq Precision	20.591

The "Pred R-Squared" of 0.9250 is in reasonable agreement with the "Adj R-Squared" of 0.9542.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 20.591 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient		Standard Error	95% CI		VIF
	Estimate	df		Low	High	
Intercept	19.80	1	0.099	19.57	20.03	
A-Eudragit RL-100	1.31	1	0.099	1.08	1.53	1.00
B-Propilen Glikol	0.74	1	0.099	0.51	0.97	1.00
AB	0.19	1	0.099	-0.035	0.42	1.00

Final Equation in Terms of Coded Factors:

Pelepasan =

+19.80

+1.31

* A

+0.74

* B

+0.19

* A * B

Final Equation in Terms of Actual Factors:

Pelepasan

=

+19.80083

+1.30583

* Eudragit RL-100

+0.73917

* Propilen Glikol

+0.19417

* Eudragit RL-100 * Propilen Glikol

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

1) Normal probability plot of the studentized residuals to check for normality of residuals.

2) Studentized residuals versus predicted values to check for constant error.

3) Externally Studentized Residuals to look for outliers, i.e., influential values.

4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN H

HASIL UJI ANOVA PENETRASI PROPRANOLOL HCL DENGAN DESAIN FAKTORIAL

Response 2 Penetrasi

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F
Model	0.72	3	0.24	12.80	0.0020 significant
<i>A-Eudragit RL-100</i>	<i>0.095</i>	<i>1</i>	<i>0.095</i>	<i>5.09</i>	<i>0.0541</i>
<i>B-Propilen Glikol</i>	<i>0.56</i>	<i>1</i>	<i>0.56</i>	<i>29.80</i>	<i>0.0006</i>
<i>AB</i>	<i>0.066</i>	<i>1</i>	<i>0.066</i>	<i>3.52</i>	<i>0.0975</i>
Pure Error	0.15	8	0.019		
Cor Total	0.87	11			

The Model F-value of 12.80 implies the model is significant. There is only a 0.20% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case B are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.14	R-Squared	0.8276
Mean	2.09	Adj R-Squared	0.7630
C.V. %	6.54	Pred R-Squared	0.6121
PRESS	0.34	Adeq Precision	7.714

The "Pred R-Squared" of 0.6121 is in reasonable agreement with the "Adj R-Squared" of 0.7630.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 7.714 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	2.09	1	0.040	2.00	2.19	
A-Eudragit RL-100	0.089	1	0.040	-2.006E-003	0.18	1.00
B-Propilen Glikol	0.22	1	0.040	0.12	0.31	1.00
AB0.074	1	0.040	-0.017	0.17	1.00	

Final Equation in Terms of Coded Factors:

Penetrasi =

+2.09

+0.089 * A

+0.22 * B

+0.074 * A * B

Final Equation in Terms of Actual Factors:

Penetrasi =

+2.09417

+0.089167 * Eudragit RL-100

+0.21583 * Propilen Glikol

+0.074167 * Eudragit RL-100 * Propilen Glikol

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

- 1) Normal probability plot of the studentized residuals to check for normality of residuals.
- 2) Studentized residuals versus predicted values to check for constant error.
- 3) Externally Studentized Residuals to look for outliers, i.e., influential values.
- 4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN I

POINT PREDICTION DENGAN DESAIN FAKTORIAL

Factor	Name	Level		Low Level	Hight Level	Std. Dev	Coding
A	Eudragit RL-100	1.00	1.00	-1.00	1.00	0.000	Actual
B	Propilen Glikol	-1.00	-1.00	-1.00	1.00	0.000	Actual

Response	Prediction	SE Mean	95% CI Low	95% CI High	SE Prediction	95% PI Low	95% PI High	99% of Population	
								95% TI Low	95% TI High
Pelepasan	20.1733	0.20	19.72	20.63	0.40	19.26	21.09	18.29	22.06
Penetrasi	1.89333	0.079	1.71	2.08	0.16	1.53	2.26	1.14	2.64

LAMPIRAN J

TABEL UJI r

DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT	DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT
1	.997	1.000	24	.388	.496
2	.950	.990	25	.381	.487
3	.878	.959	26	.374	.478
4	.811	.917	27	.367	.470
5	.754	.874	28	.361	.463
6	.707	.834	29	.355	.456
7	.666	.798	30	.349	.449
8	.632	.765	35	.325	.418
9	.602	.735	40	.304	.393
10	.576	.708	48	.288	.372
11	.553	.684	50	.273	.354
12	.532	.661	60	.250	.325
13	.514	.641	70	.232	.302
14	.497	.623	80	.217	.283
15	.482	.606	90	.205	.267
16	.468	.590	100	.195	.254
17	.456	.575	125	.174	.228
18	.444	.561	150	.159	.208
19	.433	.549	200	.138	.181
20	.423	.537	300	.113	.148
21	.413	.526	400	.098	.128
22	.404	.515	500	.088	.115
23	.396	.505	1000	.062	.081

Dikutip dari: Soedigdo & Soedigdo (1977)

LAMPIRAN K

Tabel uji F

Baris pertama pada setiap pasangan baris adalah titik pada distribusi F untuk aras 0.05; baris kedua untuk aras 0.01.

		Derajat kebebasan untuk rataan kuadrat yang lebih besar																									
		1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞		
Derajat kebebasan untuk rataan kuadrat yang lebih kecil.	16	4.49 8.53	3.63 6.23	3.24 5.29	3.01 4.77	2.85 4.44	2.74 4.20	2.66 4.03	2.59 3.89	2.54 3.78	2.49 3.69	2.45 3.61	2.42 3.55	2.37 3.45	2.33 3.37	2.28 3.25	2.24 3.18	2.20 3.10	2.16 3.01	2.13 2.96	2.09 2.89	2.07 2.86	2.04 2.80	2.02 2.77	2.02 2.75	2.01	2.75
	17	4.45 8.40	3.59 6.11	3.20 5.18	2.96 4.67	2.81 4.34	2.70 4.10	2.62 3.93	2.55 3.79	2.50 3.68	2.45 3.59	2.41 3.52	2.38 3.45	2.33 3.35	2.29 3.27	2.23 3.19	2.19 3.07	2.15 2.90	2.11 2.91	2.08 2.83	2.04 2.78	2.02 2.71	2.00 2.68	1.99 2.62	1.97 2.59	1.96	2.65
	18	4.41 8.36	3.55 6.01	3.16 5.09	2.93 4.58	2.77 4.25	2.66 4.01	2.58 3.85	2.51 3.71	2.46 3.60	2.41 3.51	2.37 3.44	2.34 3.37	2.29 3.27	2.25 3.19	2.19 3.07	2.15 2.90	2.11 2.91	2.07 2.83	2.04 2.78	2.00 2.71	1.98 2.68	1.95 2.62	1.93 2.59	1.92	2.57	2.65
	19	4.38 8.18	3.52 5.93	3.13 5.01	2.90 4.50	2.74 4.17	2.63 3.94	2.55 3.77	2.48 3.63	2.43 3.52	2.38 3.43	2.34 3.36	2.31 3.30	2.26 3.19	2.21 3.12	2.15 3.00	2.11 2.92	2.07 2.84	2.02 2.76	2.00 2.70	1.96 2.63	1.94 2.60	1.91 2.54	1.90 2.51	1.88	2.49	2.65
	20	4.35 8.10	3.49 5.85	3.10 4.94	2.87 4.43	2.71 4.10	2.60 3.87	2.52 3.71	2.45 3.56	2.40 3.45	2.35 3.37	2.31 3.30	2.28 3.23	2.23 3.13	2.18 3.05	2.12 2.94	2.08 2.86	2.04 2.77	1.99 2.69	1.96 2.63	1.92 2.56	1.90 2.53	1.87 2.47	1.85 2.44	1.84	2.42	2.65
	21	4.32 8.02	3.47 5.78	3.07 4.87	2.84 4.37	2.68 4.04	2.57 3.81	2.49 3.65	2.42 3.51	2.37 3.40	2.32 3.31	2.28 3.24	2.25 3.17	2.20 3.07	2.15 2.99	2.09 2.88	2.05 2.80	2.00 2.72	1.96 2.63	1.93 2.58	1.90 2.51	1.87 2.47	1.84 2.42	1.82 2.38	1.81	2.42	2.65
	22	4.30 7.94	3.44 5.72	3.05 4.82	2.82 4.31	2.66 3.99	2.55 3.76	2.47 3.59	2.40 3.45	2.35 3.35	2.30 3.26	2.26 3.18	2.23 3.12	2.18 3.02	2.13 2.94	2.07 2.83	2.03 2.75	1.98 2.67	1.93 2.58	1.91 2.53	1.87 2.46	1.84 2.41	1.82 2.37	1.79 2.32	1.77	2.42	2.65
	23	4.28 7.88	3.42 5.66	3.03 4.76	2.80 4.26	2.64 3.94	2.53 3.71	2.45 3.54	2.38 3.41	2.32 3.30	2.28 3.21	2.24 3.14	2.20 3.07	2.14 2.97	2.10 2.89	2.04 2.78	2.00 2.70	1.96 2.62	1.91 2.53	1.88 2.48	1.84 2.41	1.82 2.37	1.79 2.32	1.77	2.42	2.65	2.65
	24	4.26 7.82	3.40 5.61	3.01 4.72	2.78 4.22	2.62 3.90	2.51 3.67	2.43 3.50	2.36 3.36	2.30 3.25	2.26 3.17	2.22 3.09	2.18 3.03	2.13 2.93	2.09 2.85	2.02 2.74	1.98 2.66	1.94 2.58	1.89 2.49	1.86 2.44	1.82 2.36	1.80 2.33	1.76 2.27	1.74	2.42	2.65	2.65
	25	4.24 7.77	3.38 5.57	2.99 4.68	2.76 4.18	2.60 3.86	2.49 3.63	2.41 3.46	2.34 3.32	2.28 3.21	2.24 3.13	2.20 3.05	2.16 2.99	2.11 2.89	2.06 2.81	2.00 2.70	1.96 2.62	1.92 2.54	1.87 2.45	1.84 2.40	1.80 2.32	1.77 2.29	1.74 2.23	1.72	2.42	2.65	2.65
	26	4.22 7.72	3.37 5.53	2.89 4.64	2.74 4.14	2.59 3.82	2.47 3.59	2.39 3.42	2.32 3.29	2.27 3.17	2.22 3.09	2.18 3.02	2.15 2.96	2.10 2.86	2.05 2.77	1.99 2.66	1.95 2.58	1.90 2.50	1.85 2.41	1.82 2.36	1.78 2.28	1.76 2.25	1.72	2.42	2.65	2.65	2.65
	27	4.21 7.68	3.35 5.49	2.96 4.60	2.73 4.11	2.57 3.79	2.46 3.56	2.37 3.39	2.30 3.26	2.25 3.14	2.20 3.06	2.16 2.98	2.13 2.93	2.08 2.83	2.03 2.74	1.97 2.63	1.93 2.55	1.88 2.47	1.84 2.38	1.80 2.33	1.76 2.25	1.74 2.21	1.71	2.42	2.65	2.65	2.65
	28	4.20 7.64	3.34 5.45	2.95 4.57	2.71 4.07	2.56 3.76	2.44 3.53	2.36 3.36	2.29 3.23	2.24 3.11	2.19 3.03	2.15 2.95	2.12 2.90	2.06 2.80	2.02 2.71	1.96 2.60	1.91 2.52	1.87 2.44	1.81 2.35	1.78 2.30	1.75 2.22	1.72	2.42	2.65	2.65	2.65	2.65
	29	4.18 7.60	3.33 5.52	2.93 4.54	2.70 4.04	2.54 3.73	2.43 3.50	2.35 3.32	2.28 3.20	2.22 3.08	2.18 2.92	2.14 2.87	2.10 2.87	2.05 2.77	2.00 2.68	1.94 2.57	1.89 2.49	1.85 2.41	1.80 2.32	1.77 2.27	1.73	2.42	2.65	2.65	2.65	2.65	2.65
	30	4.17 7.56	3.32 5.59	2.92 4.51	2.69 4.02	2.53 3.70	2.42 3.47	2.34 3.30	2.27 3.17	2.21 3.06	2.16 2.98	2.12 2.90	2.09 2.84	2.04 2.74	1.99 2.66	1.93 2.55	1.89 2.47	1.84 2.38	1.79 2.29	1.76 2.24	1.72	2.42	2.65	2.65	2.65	2.65	2.65

(bersambung)

Tabel uji F (lanjutan)

Baris pertama pada setiap pasangan baris adalah titik pada distribusi F untuk aras 0.05; baris kedua untuk aras 0.01.

		Derajat kebebasan untuk rataan kuadrat yang lebih besar.																									
		1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞		
32	Derajat kebebasan untuk rataan kuadrat yang lebih kecil.	4.15	3.30	2.90	2.67	2.51	2.40	2.32	2.25	2.19	2.14	2.10	2.07	2.02	1.97	1.91	1.86	1.82	1.76	1.74	1.69	1.67	1.64	1.61	1.59		
		7.50	5.34	4.46	3.97	3.66	3.42	3.25	3.12	3.01	2.94	2.86	2.80	2.70	2.62	2.51	2.42	2.34	2.25	2.20	2.12	2.08	2.02	1.98	1.96		
34		4.13	3.28	2.88	2.65	2.49	2.38	2.30	2.23	2.17	2.12	2.08	2.05	2.00	1.95	1.89	1.84	1.80	1.74	1.71	1.67	1.64	1.61	1.59	1.57		
		7.44	5.29	4.42	3.93	3.61	3.38	3.21	3.08	2.97	2.89	2.82	2.76	2.66	2.58	2.47	2.38	2.30	2.21	2.15	2.08	2.04	1.98	1.94	1.91		
36		4.11	3.26	2.86	2.63	2.48	2.36	2.28	2.21	2.15	2.10	2.06	2.03	1.99	1.93	1.87	1.82	1.78	1.72	1.69	1.65	1.62	1.59	1.56	1.55		
		7.39	5.25	4.38	3.89	3.58	3.35	3.18	3.04	2.94	2.86	2.78	2.72	2.62	2.54	2.43	2.35	2.26	2.17	2.12	2.04	2.00	1.94	1.90	1.87		
38		4.10	3.25	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.96	1.92	1.86	1.80	1.76	1.71	1.67	1.63	1.60	1.57	1.54	1.53		
		7.36	5.21	4.34	3.86	3.54	3.32	3.15	3.02	2.91	2.82	2.75	2.69	2.59	2.51	2.40	2.32	2.22	2.14	2.08	2.00	1.97	1.90	1.86	1.84		
40		4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.07	2.04	2.00	1.95	1.90	1.84	1.79	1.74	1.69	1.66	1.61	1.59	1.55	1.53	1.51		
		7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.88	2.80	2.73	2.66	2.56	2.49	2.37	2.29	2.20	2.11	2.05	1.97	1.94	1.88	1.84	1.81		
42		4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.02	1.99	1.94	1.89	1.82	1.78	1.73	1.68	1.64	1.60	1.57	1.54	1.51	1.49		
		7.27	5.15	4.29	3.80	3.49	3.26	3.10	2.96	2.86	2.77	2.70	2.64	2.54	2.46	2.35	2.26	2.17	2.08	2.02	1.94	1.91	1.85	1.80	1.78		
44		4.06	3.21	2.82	2.58	2.43	2.31	2.23	2.16	2.10	2.05	2.01	1.98	1.92	1.88	1.81	1.76	1.72	1.66	1.63	1.58	1.56	1.52	1.50	1.48		
		7.24	5.12	4.26	3.78	3.46	3.24	3.07	2.94	2.84	2.75	2.68	2.62	2.52	2.44	2.32	2.24	2.15	2.06	2.00	1.92	1.88	1.82	1.78	1.75		
46		4.05	3.20	2.81	2.57	2.42	2.30	2.22	2.14	2.09	2.04	2.00	1.97	1.91	1.87	1.80	1.75	1.71	1.65	1.62	1.57	1.54	1.51	1.48	1.46		
		7.21	5.10	4.24	3.76	3.44	3.22	3.05	2.92	2.82	2.73	2.66	2.60	2.50	2.42	2.30	2.22	2.13	2.04	1.98	1.90	1.86	1.80	1.76	1.72		
48		4.04	3.19	2.80	2.56	2.41	2.30	2.21	2.14	2.08	2.03	1.99	1.96	1.90	1.86	1.79	1.74	1.70	1.64	1.61	1.56	1.53	1.50	1.47	1.45		
		7.19	5.08	4.22	3.74	3.42	3.20	3.04	2.90	2.80	2.71	2.64	2.58	2.48	2.40	2.28	2.20	2.11	2.02	1.96	1.88	1.84	1.78	1.73	1.70		
50		4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.02	1.98	1.95	1.90	1.85	1.78	1.74	1.69	1.63	1.60	1.55	1.52	1.48	1.46	1.44		
		7.17	5.06	4.20	3.72	3.41	3.18	3.02	2.88	2.78	2.70	2.62	2.56	2.46	2.39	2.26	2.18	2.10	2.00	1.94	1.86	1.82	1.76	1.71	1.68		
55		4.02	3.17	2.78	2.54	2.38	2.27	2.18	2.11	2.05	2.00	1.97	1.93	1.88	1.83	1.76	1.72	1.67	1.61	1.58	1.52	1.50	1.46	1.43	1.41		
		7.12	5.01	4.16	3.68	3.37	3.15	2.98	2.85	2.75	2.66	2.59	2.53	2.43	2.35	2.23	2.15	2.06	1.96	1.90	1.82	1.78	1.71	1.66	1.64		
60		4.00	3.15	2.76	2.52	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.86	1.81	1.75	1.70	1.65	1.59	1.56	1.50	1.48	1.44	1.41	1.39		
		7.08	4.98	4.13	3.65	3.34	3.12	2.95	2.82	2.72	2.63	2.56	2.50	2.40	2.32	2.20	2.12	2.03	1.93	1.87	1.79	1.74	1.68	1.63	1.60		
65		3.99	3.14	2.75	2.51	2.36	2.24	2.15	2.08	2.02	1.98	1.94	1.90	1.85	1.80	1.73	1.68	1.63	1.57	1.54	1.49	1.46	1.42	1.39	1.37		
		7.04	4.95	4.10	3.62	3.31	3.09	2.92	2.79	2.70	2.61	2.54	2.47	2.37	2.30	2.18	2.09	2.00	1.90	1.84	1.76	1.71	1.64	1.60	1.56		
70		3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.01	1.97	1.93	1.89	1.84	1.79	1.72	1.67	1.62	1.56	1.53	1.47	1.45	1.40	1.37	1.35		
		7.01	4.92	4.08	3.60	3.29	3.07	2.90	2.77	2.67	2.59	2.51	2.45	2.35	2.28	2.15	2.07	1.98	1.88	1.82	1.74	1.69	1.62	1.56	1.53		
80		3.94	3.11	2.72	2.48	2.33	2.21	2.12	2.05	1.99	1.95	1.91	1.88	1.82	1.77	1.70	1.65	1.60	1.54	1.51	1.45	1.42	1.38	1.35	1.32		
		6.96	4.88	4.04	3.56	3.25	3.04	2.87	2.74	2.64	2.55	2.48	2.41	2.32	2.24	2.11	2.03	1.94	1.84	1.78	1.70	1.65	1.57	1.52	1.49		

Sumber: Scheffer (1987).

LAMPIRAN L

HASIL UJI ANOVA MOISTURE CONTENT

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	12.58	4.193333333	0.076233333
Column 2	3	16.39	5.463333333	0.028933333
Column 3	3	13.25	4.416666667	0.323733333
Column 4	3	19.69	6.563333333	0.224233333

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	10.645	3	3.5483	21.73	0.0003	4.0662
Within Groups	1.3063	8	0.1633			
Total	11.951	11				

LAMPIRAN M

CONTOH PERHITUNGAN FLUKS PELEPASAN DAN PENETRASI PADA PATCH DENGAN LUAS 12 cm²

$$\begin{aligned}\text{Fluks pelepasan :} &= 12 \text{ cm}^2 / 7,065 \text{ cm}^2 \times 20,17 \text{ jam} \times 6 \text{ jam} \\ &= 205,55 \text{ } \mu\text{g/mL}\end{aligned}$$

$$\begin{aligned}\text{Fluks penetrasi :} &= 12 \text{ cm}^2 / 7,065 \text{ cm}^2 \times 1,89 \text{ jam} \times 6 \text{ jam} \\ &= 19,26 \text{ } \mu\text{g/mL}\end{aligned}$$