

LAMPIRAN A
PERHITUNGAN STATISTIK KURVA BAKU

Data Kurva Baku Propranolol HCl dalam Larutan Dapar Fosfat
Isotonis pH 7,4 Pengujian I

Konsentrasi (ppm)	Absorbansi	X²	Y²	XY
5,03	0,113	25,3009	0,0128	0,5684
15,09	0,279	227,7081	0,0778	4,2101
25,15	0,492	632,5225	0,2421	12,3738
35,21	0,690	1239,7441	0,4761	24,2949
45,27	0,861	2049,3729	0,7413	38,9774
		$\Sigma =$ 4174,6485	$\Sigma =$ 1,5501	$\Sigma =$ 80,4246

Data Kurva Baku Propranolol HCl dalam Larutan Dapar Fosfat
Isotonis pH 7,4 Pengujian II

Konsentrasi (ppm)	Absorbansi	X²	Y²	XY
5,01	0,097	25,1001	0,0094	0,4860
15,03	0,263	225,9009	0,0692	3,9529
25,05	0,466	627,5025	0,2172	11,6733
35,07	0,682	1229,9049	0,4651	23,9177
45,09	0,855	2033,1081	0,7310	38,5519
		$\Sigma =$ 4141,5165	$\Sigma =$ 1,5095	$\Sigma =$ 79,0426

Data Kurva Baku Propranolol HCl dalam Larutan Dapar Fosfat
Isotonis pH 7,4 Pengujian III

Konsentrasi (ppm)	Absorbansi	X ²	Y ²	XY
5,02	0,115	25,2004	0,0132	0,5773
15,06	0,282	226,8036	0,0795	4,2469
25,10	0,497	630,0100	0,2470	12,4747
35,14	0,691	1234,8196	0,4775	24,2817
45,18	0,870	2041,2324	0,7569	39,3066
		Σ =	Σ =	Σ =
		4158,0660	1,5741	80,8872

	Σ X ²	ΣXY	ΣY ²	N	Ssi	RDF
I	4174,6485	80,4246	1,5501	5	0,0007	4
II	4141,5165	79,0426	1,5095	5	0,0009	4
III	4158,0660	80,8872	1,5741	5	0,0006	4
	12474,2310	240,3544	4,6337		0,0022	

$$\begin{aligned}SSc &= \sum Yc - [(\sum Xyc)^2 / \sum Xc] \\&= 4,6337 - [(240,3544)^2 / 12474,2310] \\&= 0,0025\end{aligned}$$

$$\begin{aligned}SSp &= SS1 + SS2 + SS3 \\&= 0,0007 + 0,0009 + 0,0006 \\&= 0,0022\end{aligned}$$

$$\begin{aligned}F_{hitung} &= (SSc - SSp / k - 1) / (SSp / 12) \\&= (0,0025 - 0,0022 / 3 - 1) / (0,0022 / 12) = 0,08\end{aligned}$$

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

LAMPIRAN B
PERHITUNGAN MOISTURE CONTENT (MC)

Formula a

W (gram)	W _p (gram)	W _a (gram)	MC (%)
0,1933	0,1632	0,0301	16,04
0,2140	0,1790	0,0350	16,36
0,2222	0,1856	0,0366	16,49

Formula a

W (gram)	W _p (gram)	W _a (gram)	MC (%)
0,2631	0,1821	0,0810	30,7868
0,2771	0,1936	0,0835	30,1268
0,2804	0,1952	0,0852	30,3665

Formula b

W (gram)	W _p (gram)	W _a (gram)	MC (%)
0,2006	0,1660	0,0346	17,2265
0,1806	0,1481	0,0325	17,9827
0,1944	0,1613	0,0331	17,0079

Formula ab

W (gram)	W _p (gram)	W _a (gram)	MC (%)
0,3511	0,2358	0,1153	32,8275
0,3436	0,2329	0,1107	32,2149
0,3381	0,2286	0,1095	32,3683

Keterangan :

W = berat mula-mula

W_p = berat kering

W_a = selisih antara W dan W_p

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

Contoh : (0,0301/0,1632) x 100% = 16,09

LAMPIRAN C

Anova:
Single
Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variane</i>
Column 1	3	48,89	16,2966	0,05363
Column 2	3	91,280	30,4267	0,11161
Column 3	3	52,217	17,4057	0,26164
Column 4	3	97,410	32,4702	0,10161

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	647,35	3	215,783	1633,15	1,74E-11	4,066
Within Groups	1,0570	8	0,13212			1
Total	648,40	11				

LAMPIRAN D
HASIL AKURASI DAN PRESISI PENETAPAN KADAR
PROPRANOLOL HCL DALAM LARUTAN DAPAR FOSFAT
ISOTONIS PH 7,4 DALAM FORMULA BLANGKO AB

Repli kasi	%	Abs	FP	C(ppm)	C (teoritis)	% perolehan kembali
1	80	0,259	5	64,8428	64,768	100,11
	100	0,320	5	80,8000	80,960	99,80
	120	0,382	5	97,0188	97,152	99,86
2	80	0,256	5	65,1044	65,024	100,12
	100	0,322	5	81,3232	81,280	100,05
	120	0,384	5	97,4128	97,536	99,87
3	80	0,257	5	64,3196	64,256	100,09
	100	0,318	5	80,2768	80,320	99,95
	120	0,380	5	96,4957	96,384	100,16

Contoh perhitungan :

Dari hasil serapan dimasukkan ke dalam persamaan kurva baku terpilih yaitu

$$y = 0,0191x + 0,0113$$

Dimana: y = Serapan dan 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

$$y = 0,0191x + 0,0113$$

$$0,259 = 0,0191x + 0,0113$$

$$x = 64,8428.$$

$$\% \text{ perolehan kembali} = (64,8428/64,768) \times 100\% = 100,11$$

LAMPIRAN E
HASIL PENETAPAN KADAR *PATCH* PROPRANOLOL HCL

Formula	Uji	Abs	FP	C (ppm)	C (mg/cm²)	% kadar	X ± SD
-1	1	0,322	5	81,290	4,065	99,62	4,029 ± 0,033
	2	0,319	5	80,506	4,025	98,66	
	3	0,317	5	79,983	3,999	98,02	
a	1	0,295	5	74,227	3,711	90,97	3,755 ± 0,039
	2	0,301	5	75,797	3,789	92,89	
	3	0,299	5	75,274	3,764	92,24	
b	1	0,324	5	81,814	4,091	100,26	4,082 ± 0,040
	2	0,320	5	80,767	4,038	98,98	
	3	0,326	5	82,337	4,117	100,90	
ab	1	0,309	5	77,889	3,894	95,45	3,929 ± 0,040
	2	0,315	5	79,459	3,973	97,38	
	3	0,311	5	78,413	3,920	96,08	

UJI ANOVA PENETAPAN KADAR PROPRANOL HCI

Anova: Single Factor
SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	12,08	4,02966	0,00110
Column 2	3	11,26	3,75466	0,00158
Column 3	3	12,24	4,082	0,00162
Column 4	3	11,78	3,929	0,00162

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	0,18708	3	0,06236	42,0390	3,04E-05	4,06618
Within Groups	0,01186	8	0,00148			
Total	0,19895	11				

LAMPIRAN F
HASIL AKURASI PRESISI PELEPASAN DAN PENETRASI
PROPRANOLOL HCL DALAM LARUTAN DAPAR FOSFAT PH 7,4
DALAM FORMULA BLANGKO AB

Tabel 4.8. Akurasi Presisi Pelepasan Dan Penetrasi

Replikasi	%	Abs	C (ppm)	C (Teoritis)	% Perolehan Kembali
1	80	0,319	16,1011	16,224	99,24
	100	0,401	20,3913	20,280	100,55
	120	0,472	24,1059	24,336	99,05
2	80	0,316	15,9442	16,128	98,86
	100	0,399	20,2866	20,160	100,63
	120	0,469	23,9489	24,192	98,99
3	80	0,321	16,2057	16,064	100,88
	100	0,395	20,0774	20,080	99,98
	120	0,474	24,2105	24,096	100,47

LAMPIRAN G
DATA PELEPASAN PROPRANOLOL HCL

1. Hasil Uji Pelepasan Patch Propranolol Formula -1

Replikasi	t(jam)	Abs	Cn'(ppm)	FP	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,129	6,1617	5	261,64
	0,5	0,178	8,7258	5	370,52
	0,45	0,211	10,4526	5	443,85
	1	0,237	11,8132	5	501,62
	1,5	0,277	13,9063	5	590,50
	2	0,315	15,8948	5	674,94
	2,5	0,362	18,3543	5	779,37
	3	0,397	20,1858	5	857,15
	4	0,478	24,4244	5	1037,13
2	5	0,505	25,8373	5	1097,12
	6	0,583	29,9189	5	1270,44
	0,25	0,132	6,3187	5	268,31
	0,5	0,184	9,0398	5	383,85
	0,45	0,219	10,8713	5	461,63
	1	0,261	13,0691	5	554,95
	1,5	0,313	15,7902	5	670,50
	2	0,345	17,4647	5	741,60
	2,5	0,376	19,0869	5	810,48
3	3	0,409	20,8137	5	883,81
	4	0,469	23,9534	5	1017,13
	5	0,535	27,4071	5	1163,78
	6	0,576	29,5526	5	1254,89
	0,25	0,136	6,5280	5	277,20
	0,5	0,189	9,3014	5	394,96
	0,45	0,224	11,1329	5	472,74
	1	0,265	13,2784	5	563,84
	1,5	0,293	14,7436	5	626,05
3	2	0,321	16,2088	5	688,27
	2,5	0,355	17,9880	5	763,82
	3	0,387	19,6625	5	834,92
	4	0,446	22,7499	5	966,02
	5	0,519	26,5699	5	1128,23
	6	0,569	29,1863	5	1239,33

Keterangan : Luas membran $7,065 \text{ cm}^2$

2. Hasil Uji Pelepasan Patch Propranolol Formula a

Replikasi	t(jam)	Abs	Cn ² (ppm)	FP	Qt (µg/cm ²)
1	0,25	0,124	5,9001	5	250,53
	0,5	0,148	7,1559	5	303,86
	0,45	0,169	8,2548	5	350,52
	1	0,228	11,3422	5	481,62
	1,5	0,292	14,6913	5	623,83
	2	0,341	17,2554	5	732,71
	2,5	0,364	18,4589	5	783,82
	3	0,388	19,7148	5	837,15
	4	0,422	21,4940	5	912,70
5	0,459	23,4301	5	994,91	
6	0,503	25,7326	5	1092,68	
2	0,25	0,117	5,5338	5	234,98
	0,5	0,139	6,6850	5	283,86
	0,45	0,157	7,6269	5	323,86
	1	0,225	11,1852	5	474,96
	1,5	0,296	14,9006	5	632,72
	2	0,339	17,1507	5	728,27
	2,5	0,357	18,0926	5	768,26
	3	0,373	18,9299	5	803,82
	4	0,431	21,9649	5	932,69
	5	0,466	23,7964	5	1010,46
6	0,519	26,5699	5	1128,23	
3	0,25	0,129	6,1617	5	261,64
	0,5	0,143	6,8943	5	292,75
	0,45	0,155	7,5222	5	319,42
	1	0,223	11,0806	5	470,51
	1,5	0,293	14,7436	5	626,05
	2	0,328	16,5751	5	703,83
	2,5	0,381	19,3485	5	821,59
	3	0,406	20,6567	5	877,14
	4	0,436	22,2266	5	943,80
	5	0,471	24,0581	5	1021,57
6	0,511	26,1512	5	1110,46	

Keterangan : Luas membran 7,065 cm²

3. Hasil Uji Pelepasan Patch Propranolol Formula b

Replikasi	t(jam)	Abs	Cn'(ppm)	FP	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,121	5,7428	5	243,85
	0,5	0,154	7,4695	5	317,18
	0,45	0,182	8,9346	5	379,39
	1	0,286	14,3765	5	610,47
	1,5	0,325	16,4172	5	697,12
	2	0,367	18,6149	5	790,44
	2,5	0,389	19,7661	5	839,32
	3	0,443	22,5917	5	959,31
	4	0,509	26,0452	5	1105,95
2	5	0,551	28,2429	5	1199,27
	6	0,606	31,1208	5	1321,48
	0,25	0,129	6,1614	5	261,63
	0,5	0,175	8,5684	5	363,84
	0,45	0,202	9,9812	5	423,83
	1	0,242	12,0742	5	512,70
	1,5	0,311	15,6847	5	666,02
	2	0,357	18,0917	5	768,22
	2,5	0,376	19,0859	5	810,44
3	3	0,448	22,8533	5	970,42
	4	0,531	27,1964	5	1154,84
	5	0,561	28,7662	5	1221,49
	6	0,589	30,2313	5	1283,71
	0,25	0,119	5,6381	5	239,41
	0,5	0,142	6,8416	5	290,51
	0,45	0,185	9,0916	5	386,06
	1	0,261	13,0684	5	554,92
	1,5	0,306	15,4231	5	654,91
3	2	0,325	16,4172	5	697,12
	2,5	0,356	18,0393	5	766,00
	3	0,439	22,3824	5	950,42
	4	0,522	26,7254	5	1134,84
	5	0,553	28,3475	5	1203,72
	6	0,592	30,3883	5	1290,37

Keterangan : Luas membran 7,065 cm²

4. Hasil Uji Pelepasan Patch Propranolol Formula ab

Replikasi	t(jam)	Abs	Cn'(ppm)	FP	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,118	5,5861	5	237,20
	0,5	0,128	6,1094	5	259,42
	0,45	0,145	6,9990	5	297,20
	1	0,204	10,0863	5	428,29
	1,5	0,247	12,3365	5	523,84
	2	0,291	14,6389	5	621,61
	2,5	0,355	17,9880	5	763,82
	3	0,417	21,2323	5	901,59
	4	0,477	24,3721	5	1034,91
2	5	0,519	26,5699	5	1128,23
	6	0,541	27,7211	5	1177,12
	0,25	0,119	5,6384	5	239,42
	0,5	0,131	6,2664	5	266,09
	0,45	0,144	6,9466	5	294,97
	1	0,192	9,4584	5	401,63
	1,5	0,249	12,4411	5	528,29
	2	0,286	14,3773	5	610,50
	2,5	0,343	17,3600	5	737,16
3	3	0,389	19,7671	5	839,37
	4	0,443	22,5929	5	959,36
	5	0,488	24,9477	5	1059,35
	6	0,553	28,3490	5	1203,78
	0,25	0,118	5,5861	5	237,20
	0,5	0,134	6,4233	5	272,75
	0,45	0,149	7,2083	5	306,08
	1	0,226	11,2376	5	477,18
	1,5	0,269	13,4877	5	572,73
2	0,312	15,7378	5	668,27	
2,5	0,341	17,2554	5	732,71	
3	0,403	20,4997	5	870,48	
4	0,455	23,2208	5	986,02	
5	0,511	26,1512	5	1110,46	
6	0,562	28,8200	5	1223,78	

Keterangan : Luas membran 7,065 cm²

LAMPIRAN H

DATA PENETRASI PROPRANOLOL HCL

1. Hasil Uji Penetrasi Patch Propranolol Formula -1

Replikasi	t(jam)	Abs	C n'(ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,137	6,5803	55,88
	0,5	0,215	10,6620	90,54
	0,45	0,286	14,3773	122,10
	1	0,374	18,9822	161,21
	1,5	0,421	21,4417	182,09
	2	0,478	24,4244	207,43
	2,5	0,514	26,3082	223,42
	3	0,565	28,9770	246,09
	4	0,586	30,0759	255,42
	5	0,762	39,2857	333,64
6	0,823	42,4778	360,74	
2	0,25	0,142	6,8420	58,11
	0,5	0,221	10,9759	93,21
	0,45	0,292	14,6913	124,77
	1	0,382	19,4008	164,76
	1,5	0,408	20,7614	176,31
	2	0,474	24,2151	205,64
	2,5	0,519	26,5699	225,64
	3	0,591	30,3375	257,65
	4	0,633	32,5353	276,31
	5	0,754	38,8671	330,08
6	0,839	43,3150	367,86	
3	0,25	0,149	7,2083	61,22
	0,5	0,218	10,8189	91,88
	0,45	0,296	14,9006	126,54
	1	0,357	18,0926	153,65
	1,5	0,436	22,2266	188,76
	2	0,481	24,5814	208,76
	2,5	0,522	26,7268	226,98
	3	0,57	29,2386	248,31
	4	0,613	31,4887	267,42
	5	0,756	38,9717	330,97
6	0,842	43,4720	369,19	

Keterangan : Luas membran $7,065 \text{ cm}^2$

2. Hasil Uji Penetrasi Patch Propranolol Formula a

Replikasi	t(jam)	Abs	C n'(ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,119	5,6384	47,88
	0,5	0,125	5,9524	50,55
	0,45	0,133	6,3710	54,11
	1	0,152	7,3653	62,55
	1,5	0,173	8,4642	71,88
	2	0,187	9,1968	78,10
	2,5	0,258	12,9121	109,66
	3	0,333	16,8367	142,99
	4	0,466	23,7964	202,09
2	5	0,582	29,8666	253,64
	6	0,689	35,4657	301,19
	0,25	0,116	5,4814	46,55
	0,5	0,122	5,7954	49,22
	0,45	0,141	6,7896	57,66
	1	0,158	7,6792	65,22
	1,5	0,177	8,6735	73,66
	2	0,207	10,2433	86,99
	2,5	0,249	12,4411	105,65
3	3	0,295	14,8482	126,09
	4	0,484	24,7384	210,09
	5	0,577	29,6049	251,42
	6	0,691	35,5704	302,08
	0,25	0,117	5,5338	46,99
	0,5	0,129	6,1617	52,33
	0,45	0,136	6,5280	55,44
	1	0,164	7,9932	67,88
	1,5	0,179	8,7781	74,55
3	2	0,198	9,7724	82,99
	2,5	0,255	12,7551	108,32
	3	0,309	15,5808	132,32
	4	0,468	23,9011	202,98
	5	0,589	30,2329	256,75
	6	0,702	36,1460	306,97

Keterangan : Luas membran $7,065 \text{ cm}^2$

3. Hasil Uji Penetrasi Patch Propranolol Formula b

Replikasi	t(jam)	Abs	C n'(ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,171	8,3595	70,99
	0,5	0,196	9,6677	82,10
	0,45	0,226	11,2376	95,43
	1	0,248	12,3888	105,21
	1,5	0,278	13,9587	118,55
	2	0,298	15,0052	127,43
	2,5	0,324	16,3658	138,98
	3	0,442	22,5406	191,43
	4	0,604	31,0178	263,42
2	5	0,738	38,0298	322,97
	6	0,869	44,8849	381,18
	0,25	0,177	8,6735	73,66
	0,5	0,189	9,3014	78,99
	0,45	0,223	11,0806	94,10
	1	0,264	13,2261	112,32
	1,5	0,286	14,3773	122,10
	2	0,301	15,1622	128,76
	2,5	0,359	18,1973	154,54
3	3	0,492	25,1570	213,64
	4	0,647	33,2679	282,53
	5	0,773	39,8613	338,53
	6	0,862	44,5186	378,08
	0,25	0,173	8,4642	71,88
	0,5	0,194	9,5631	81,21
	0,45	0,221	10,9759	93,21
	1	0,262	13,1214	111,43
	1,5	0,283	14,2203	120,76
3	2	0,331	16,7321	142,09
	2,5	0,409	20,8137	176,76
	3	0,474	24,2151	205,64
	4	0,635	32,6400	277,19
	5	0,763	39,3380	334,08
	6	0,849	43,8383	372,29

Keterangan : Luas membran $7,065 \text{ cm}^2$

4. Hasil Uji Penetrasi Patch Propranolol Formula ab

Replikasi	t(jam)	Abs	C n'(ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,112	5,2721	44,77
	0,5	0,138	6,6327	56,32
	0,45	0,154	7,4699	63,43
	1	0,189	9,3014	78,99
	1,5	0,278	13,9587	118,54
	2	0,391	19,8718	168,76
	2,5	0,464	23,6918	201,20
	3	0,518	26,5175	225,20
2	4	0,568	29,1340	247,42
	5	0,682	35,0994	298,08
	6	0,725	37,3496	317,19
	0,25	0,118	5,5861	47,44
	0,5	0,14	6,7373	57,22
	0,45	0,159	7,7316	65,66
	1	0,202	9,9817	84,77
	1,5	0,269	13,4877	114,54
3	2	0,382	19,4008	164,76
	2,5	0,46	23,4825	199,42
	3	0,527	26,9885	229,20
	4	0,602	30,9131	262,53
	5	0,663	34,1052	289,64
	6	0,737	37,9775	322,52
	0,25	0,124	5,9001	50,10
	0,5	0,144	6,9466	58,99
3	0,45	0,153	7,4176	62,99
	1	0,202	9,9817	84,77
	1,5	0,277	13,9063	118,10
	2	0,335	16,9414	143,87
	2,5	0,441	22,4882	190,98
	3	0,489	25,0000	212,31
	4	0,619	31,8027	270,08
	5	0,679	34,9424	296,75
6	0,729	37,5589	318,97	

Keterangan : Luas membran $7,065 \text{ cm}^2$

LAMPIRAN I
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	p-value Prob > F
Model	2192.83	3	730.94	31.50	< 0.0001 significant
<i>A-cmc na</i>	316.21	1	316.21		13.63
<i>B-menthol</i>	11.60	1	11.60		0.50
<i>AB</i>	1865.01	1	1865.01		80.37
Pure Error	185.64	8	23.20		
Cor Total	2378.47	11			

The Model F-value of 31.50 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, AB 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.	4.82	R-Squared	0,9219
Mean	165.85	Adj R-Squared	0.8927
C.V. %	2.90	Pred R-Squared	0.8244
PRESS	417.69	Adeq Precision	12.656

The "Pred R-Squared" of 0.8244 is in reasonable agreement with the "Adj R-Squared" of 0.8927.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your

ratio of 12.656 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	165.85	1	1.39	162.64	169.06	
A-cmc na	-5.13	1	1.39	-8.34	-1.93	1.00
B-menthol	0.98	1	1.39	-2.22	4.19	1.00
AB	12.47	1	1.39	9.26	15.67	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{pelepasan} &= +165.85 \\
 &\quad -5.13 \quad * A \\
 &\quad +0.98 \quad * B \\
 &\quad +12.47 \quad * A * B
 \end{aligned}$$

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 J
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	121.68	3	40.56	129.97	< 0.0001	significant
<i>A-cmc na</i>	28.86	1	28.86	92.48	< 0.0001	
<i>B-menthol</i>	92.57	1	92.57	296.65	< 0.0001	
<i>AB</i>	0.24	1	0.24	0.78	0.4027	
Pure Error	2.50	8	0.31			
Cor Total	124.18	11				

The Model F-value of 129.97 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.	0.56	R-Squared	0.9799
Mean	49.38	Adj R-Squared	0.9724
C.V. %	1.13	Pred R-Squared	0.9548
PRESS	5.62	Adeq Precision	26.840

The "Pred R-Squared" of 0.9548 is in reasonable agreement with the "Adj R-Squared" of 0.9724.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your

ratio of 26.840 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	49.38	1	0.16	49.01	49.75	
A-cmc na	-1.55	1	0.16	-1.92	-1.18	1.00
B-menthol	2.78	1	0.16	2.41	3.15	1.00
AB	-0.14	1	0.16	-0.51	0.23	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned} \text{penetrasi} = & +49.38 \\ & -1.55 * A \\ & +2.78 * B \\ & -0.14 * A * B \end{aligned}$$

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 K
POINT PREDICTION DENGAN DESAIN FAKTORIAL

Factor	Name	Level	Low Level	High Level	Std. Dev	Coding
A	CMC Na	1.00	-1.00	1.00	0.000	Actual
B	Menthol	1,00	-1.00	1.00	0.000	Actual

Response	Prediction	SE Mean	95	95	SE Prediction	95	95	99% of Population	
			CI Low	CI High		PI Low	PI High	95% TI Low	95% TI High
Pelepasan	174.16	4.82	167,75	180,58	5,56	161,34	186,99	147,76	200,57
Penetrasi	50.46	0,56	49,72	51,21	0,65	48,98	51,95	47,40	53,53

LAMPIRAN L

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

LAMPIRAN M

Tabel uji F

Basis 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	4.97 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 3.16	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	2.01 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 3.16	2.19 3.08	2.15 3.00	2.11 2.92	2.08 2.84	2.04 2.79	2.02 2.76	1.99 2.70	1.97 2.67	1.96 2.65				
	18	4.41 8.28	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 3.00	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				
	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				
	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 2.79	2.04 2.67	2.00 2.58	1.96 2.53	1.93 2.46	1.90 2.42	1.87 2.37	1.85 2.33	1.84 2.29				
	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 2.36				
	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 2.46	1.87 2.42	1.84 2.37	1.81 2.33	1.80 2.29					
	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 2.28	1.76 2.26				
	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 2.23	1.72 2.21				
	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 2.92	2.06 2.89	2.00 2.81	1.96 2.70	1.92 2.62	1.87 2.54	1.84 2.45	1.80 2.40	1.77 2.32	1.74 2.29	1.72 2.23	1.71 2.19				
	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 2.46	1.85 2.49	1.82 2.44	1.78 2.36	1.76 2.33	1.72 2.27	1.70 2.23	1.69 2.19				
	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 2.16	1.68 2.12	1.67 2.10				
	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 2.18	1.69 2.13	1.67 2.09	1.65 2.06				
	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 3.00	2.14 2.92	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 2.19	1.71 2.15	1.68 2.10	1.65 2.04	1.64 2.03				
	30	4.17 7.56	3.32 5.39	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 3.04	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 2.16	1.69 2.13	1.66 2.07	1.64 2.03	1.62 2.01				

(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	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	1.89	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	1.85	1.80	1.76	1.71	1.67	1.63	1.60	1.57	1.54	1.53	
	7.35	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	1.90	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	
	7.13	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	2.93	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	2.91	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	3.96	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: Scheffler (1987).

LAMPIRAN N SERTIFIKAT PROPRANOLOL HCL

kimia farma

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No.Pemeriksaan : 80977/BB/08/02
 Tgl.Permohonan : 14 Mei 2010
 Tgl.Pemeriksaan : 03 Juni 2010
 C.A : Ada

07 JUN 2010

Periksa laporan HPL No : 80977/BB/08 - 01

HASIL PEMERIKSAAN BAHAN BAKU

NAMA BAHAN BAKU : PROPRANOLOL HCL (1000302) PROPRANOLOL HCL MEREK/PRODUSEN : Societa Italiana Medicine Scandicci Italy JUMI #4 KEMASAN : 7 drum @ 25 kg = 175 kg JUMLUH / CONTOH : 4 x 10 g (1 - 4)	TGL.PEMBUATAN : Mei 2008 DALUARSA : Mei 2013 PEMASOK : PT.Menjangnan Sakti No.BATCH : 28.051
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Pemeriksaan	Hasil	Syarat	Metode
Pemerian	1 - 4 = Serbuk kristal halus berwarna putih	Serbuk berwarna putih atau hampir putih	BP. 2003
Identifikasi	1 - 4 = Benar	-	BP. 2003
Kejernihan dan warna larutan(2 gram dalam 20 ml Methanol)	Memenuhi Pengujian	-	MPK0007
Susut pengeringan (10° konstan)	0,01%	Max,0,5 %	BP. 2003
Kadar	99,74%	-	BP. 2003
Kadar terhadap zat kering	99,75%	99,0 % - 101,0 %	BP. 2003

Kesimpulan : **DILULUSKAN/DIPOLAK** Putri
 Catatan : **Bagian Pergudangan**
 Diperiksa ulang
 Tgl.

Apoteker Penanggung Jawab PM

Jakarta,
Asisten Pengawasan Mutu

Dra. Tia Mutianingsih

Drs. Hadi Kardoko