

LAMPIRAN A

PERHITUNGAN *MOISTURE CONTENT* (MC)

Formula -1			
W (g)	Wp (g)	Wa (g)	MC (%)
0,1465	0,1270	0,0195	15,35
0,1482	0,1282	0,0200	15,60
0,1509	0,1304	0,0215	16,49
Rata - rata			15,81 ± 0,59

Formula a			
W (g)	Wp (g)	Wa (g)	MC (%)
0,3541	0,2732	0,0809	29,61
0,3511	0,2716	0,0795	29,27
0,3635	0,2817	0,0818	29,04
Rata - rata			29,31 ± 0,29

Formula b			
W (g)	Wp (g)	Wa (g)	MC (%)
0,1504	0,1295	0,0209	16,14
0,1551	0,1372	0,0215	16,09
0,1512	0,1308	0,0204	15,59
Rata - rata			15,94 ± 0,30

Formula ab			
W (g)	Wp (g)	Wa (g)	MC (%)
0,3915	0,3016	0,0899	29,82
0,3975	0,3063	0,0912	29,77
0,4001	0,3091	0,0910	29,44
Rata - rata			29,67 ± 0,21

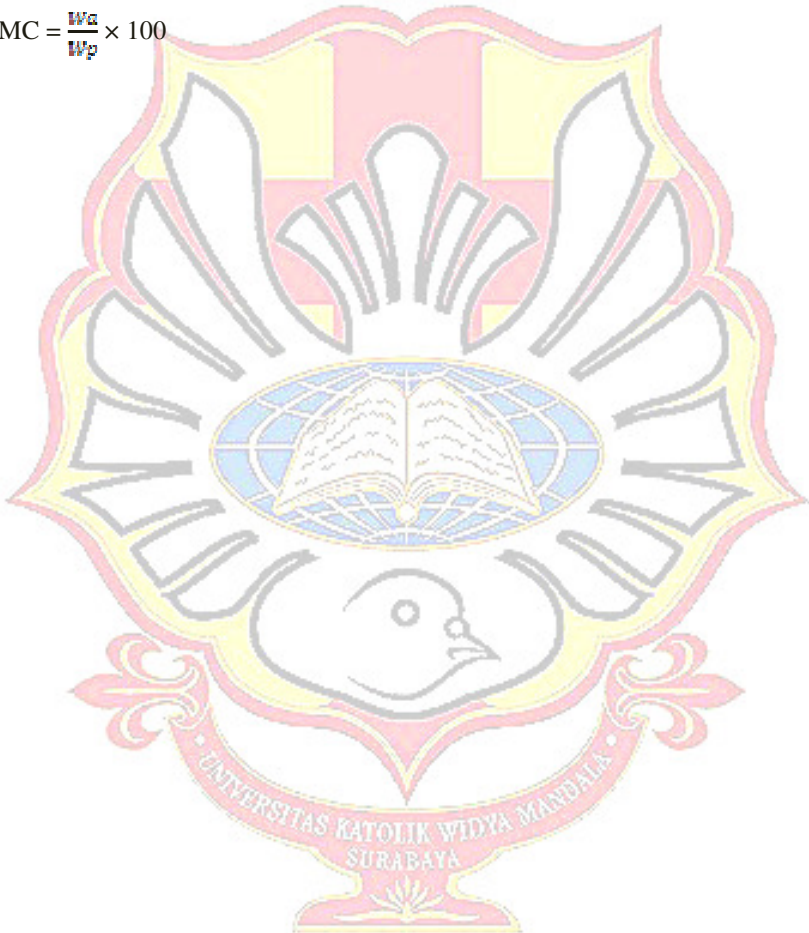
Keterangan :

W = berat mula-mula

Wp = berat kering (setelah di keringkan di desikator selama 24 jam)

Wa = selisih antara W dan Wp

$$MC = \frac{W - W_p}{W_p} \times 100$$



LAMPIRAN B
HASIL UJI ANAVA MOISTURE CONTENT

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	47.44	15.81333	0.359033
Column 2	3	87.92	29.30667	0.082233
Column 3	3	47.82	15.94	0.0925
Column 4	3	89.03	29.67667	0.042633

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	556.3341	3	185.4447	1286.917	4.5E-11	4.066181
Within Groups	1.1528	8	0.1441			
Total	557.4869	11				

LAMPIRAN C
HASIL UJI HSD MOISTURE CONTENT

Multiple Comparisons

Dependent Variable: moisturecontent

LSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-13.49667(*)	.31120	.000	-14.2143	-12.7790
	3.00	-.13000	.31120	.687	-.8476	.5876
	4.00	-13.86667(*)	.31120	.000	-14.5843	-13.1490
2.00	1.00	13.49667(*)	.31120	.000	12.7790	14.2143
	3.00	13.36667(*)	.31120	.000	12.6490	14.0843
	4.00	-.37000	.31120	.269	-1.0876	.3476
3.00	1.00	.13000	.31120	.687	-.5876	.8476
	2.00	-13.36667(*)	.31120	.000	-14.0843	-12.6490
	4.00	-13.73667(*)	.31120	.000	-14.4543	-13.0190
4.00	1.00	13.86667(*)	.31120	.000	13.1490	14.5843
	2.00	.37000	.31120	.269	-.3476	1.0876
	3.00	13.73667(*)	.31120	.000	13.0190	14.4543

* The mean difference is significant at the .05 level.

LAMPIRAN D
DATA KURVA BAKU DENGAN TIGA KALI REPLIKASI

Pengujian hari 1

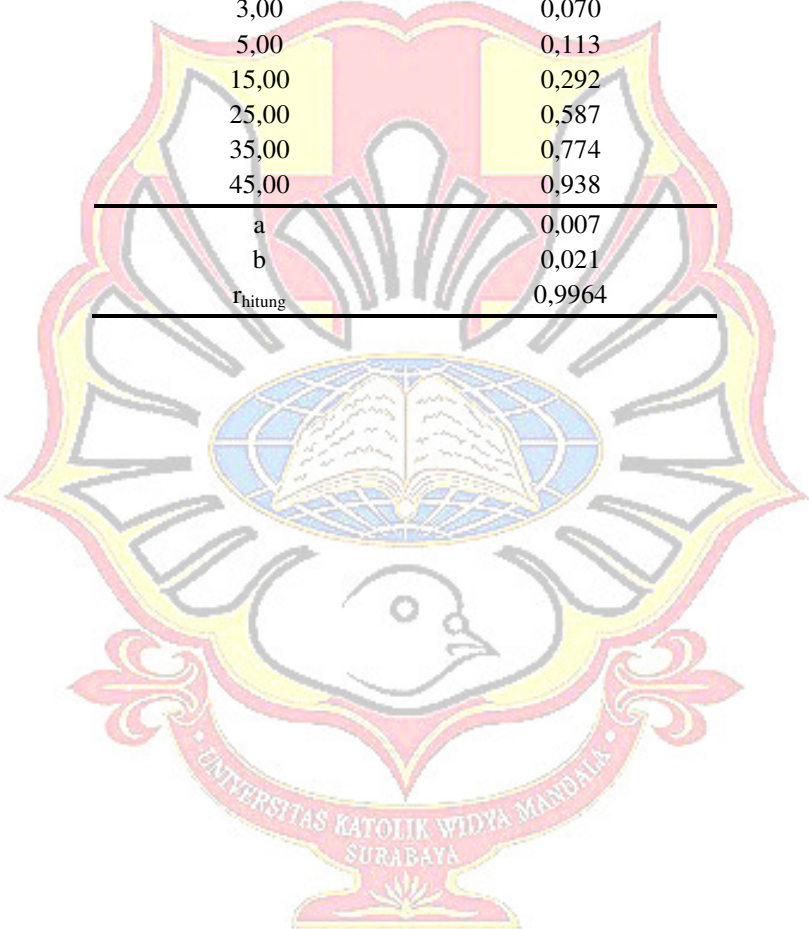
Konsentrasi ($\mu\text{g/ml}$)	Absorbansi
3,01	0,064
5,02	0,107
15,06	0,305
25,10	0,589
35,14	0,769
45,18	0,961
a	0,001
b	0,021
r_{hitung}	0,9978

Pengujian hari 2

Konsentrasi ($\mu\text{g/ml}$)	Absorbansi
3,01	0,086
5,02	0,115
15,06	0,287
25,10	0,579
35,14	0,790
45,18	0,978
a	0,007
b	0,021
r_{hitung}	0,9973

Pengujian hari 3

Konsentrasi ($\mu\text{g/ml}$)	Absorbansi
3,00	0,070
5,00	0,113
15,00	0,292
25,00	0,587
35,00	0,774
45,00	0,938
a	0,007
b	0,021
r_{hitung}	0,9964



LAMPIRAN E
PERHITUNGAN STATISTIK KURVA BAKU

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

Pengujian I

Konsentrasi (ppm)	Absorbansi	X ²	Y ²	XY
3,012	0,064	9,0721	0,0041	0,1928
5,020	0,107	25,2004	0,0114	0,5371
15,060	0,305	226,8036	0,0930	4,5933
25,100	0,589	630,0100	0,3469	14,7839
35,140	0,769	1234,8196	0,5914	27,0227
45,180	0,961	2041,2324	0,9235	43,4179
		$\Sigma = 4167,138$	$\Sigma = 1,9703$	$\Sigma = 90,5477$

Pengujian II

Konsentrasi (ppm)	Absorbansi	X ²	Y ²	XY
3,012	0,086	9,0721	0,0074	0,2590
5,020	0,115	25,2004	0,0132	0,5773
15,060	0,287	226,8036	0,0824	4,3222
25,10	0,579	630,0100	0,3352	14,5329
35,14	0,790	1234,8196	0,6241	27,7606
45,18	0,978	2041,2324	0,9565	44,1860
		$\Sigma = 4167,138$	$\Sigma = 2,0188$	$\Sigma = 91,6381$

Pengujian III

Konsentrasi (ppm)	Absorbansi	X ²	Y ²	XY
3,00	0,070	9,000	0,0049	0,210
5,00	0,113	25,000	0,0128	0,565
15,00	0,292	225,000	0,0853	4,380
25,00	0,587	625,000	0,3446	14,675
35,00	0,774	1225,000	0,5991	27,090
45,00	0,938	2025,000	0,8798	42,210
		Σ= 4134,000	Σ= 1,2650	Σ= 89,130

	ΣX ²	ΣXY	ΣY ²	N	SSi	RDF
I	4167,138	90,548	2,0188	6	0,0513	5
II	4167,138	91,638	2,0188	6	0,0036	5
III	4134,000	89,130	1,9265	6	0,0048	5
	12468,28	271,3157	5,9641			

$$\begin{aligned}
 SSc &= \sum Yc - [(\sum XYc)^2 / \sum Xc] \\
 &= 5,9641 - (271,3157^2 / 12468,28) \\
 &= 5,9641 - 5,9039 \\
 &= 0,060
 \end{aligned}$$

$$\begin{aligned}
 SSp &= SSI + SS2 + SS3 \\
 &= 0,0513 + 0,0036 + 0,0048 \\
 &= 0,0597
 \end{aligned}$$

$$\begin{aligned}
 F_{hitung} &= (SSc - SSp/k - 1) / (SSp/12) \\
 &= (0,060 - 0,0597 / 3 - 1) / (0,0597 / 12) \\
 &= 0,00015 / 0,00497 \\
 &= 0,0302
 \end{aligned}$$

$$F_{hitung} < F_{tabel\ 0.05\ (2 ; 15)} = 3,68$$

LAMPIRAN F
HASIL AKURASI PRESISI UJI PENETAPAN KADAR *PATCH*
PROPRANOLOL HCL

Hasil uji akurasi dan presisi uji penetapan kadar *patch* propranolol HCl dalam dapar fosfat isotonis pH 7,4.

	%	Abs	FP	C (ppm)	C teoritis (ppm)	% Perolehan Kembali
1	80	0,278	5	63,794	64,256	99,28
	100	0,353	5	81,083	80,480	100,75
	120	0,418	5	95,067	96,384	99,67
2	80	0,280	5	64,255	64,256	99,99
	100	0,356	5	81,775	80,320	101,81
	120	0,420	5	96,528	96,384	100,14
3	80	0,280	5	64,716	64,384	100,55
	100	0,349	5	80,161	80,320	99,84
	120	0,421	5	96,758	96,576	100,22
X (%) ± SD						100,25 ± 0,73
KV						0,73

Contoh perhitungan :

Dari hasil serapan dimasukkan kedalam persamaan kurva baku yang terpilih yaitu :

$$Y = 0,021x + 0,001$$

Dimana : y = Serapan

x = konsentrasi yang teramati

kemudian hitung % perolehan kembali dengan rumus :

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

Kadar teoritis

Missal data repliksi 1 : $Y = 0,021x + 0,001$

$$0,278 = 0,021x + 0,001$$

$$X = 12,7588 \times FP = 63,794.$$

% perolehan kembali = $\frac{63,794}{100} \times 100 \%$

$$\begin{aligned} &= 64,256 \\ &= 99,28 \% \end{aligned}$$



LAMPIRAN G
HASIL AKURASI PRESISI UJI PELEPASAN DAN PENETRASI
PATCH PROPRANOLOL HCL

Hasil uji akurasi dan presisi uji pelepasan dan penetrasi *patch* propranolol HCl dalam dapar fosfat isotonis pH 7.4.

	%	Abs	C (ppm)	C teoritis (ppm)	% Perolehan Kembali
1	80	0,213	9,762	9,619	101,48
	100	0,263	12,067	12,024	100,36
	120	0,319	14,649	14,429	101,52
2	80	0,211	9,669	9,658	100,11
	100	0,260	11,929	12,072	98,81
	120	0,317	14,557	14,486	100,49
3	80	0,209	9,578	9,638	99,38
	100	0,266	12,205	12,048	101,30
	120	0,313	14,372	14,458	99,40
X (%) ± SD					100,32 ± 0,99
KV					0,99

Contoh perhitungan :

Dari hasil serapan dimasukkan kedalam persamaan kurva baku yang terpilih yaitu :

$$Y = 0,021x + 0,001$$

Dimana : y = Serapan

x = konsentrasi yang teramati

kemudian hitung % perolehan kembali dengan rumus :

$$\% \text{ perolehan kembali} = \frac{\text{konsentrasi teramati}}{\text{Konsentrasi teoritis}} \times 100 \%$$

Konsentrasi teoritis

LAMPIRAN H
HASIL UJI PENETAPAN KADAR *PATCH* PROPRANOLOL HCL

Formula	Uji	Abs	FP	C (ppm)	C (mg/cm ²)	X ± SD	% kadar
-1	1	0,363	5	16,678	4,169	4,135 ± 0,030	102,181
	2	0,359	5	16,493	4,123		101,054
	3	0,358	5	16,447	4,112		100,779
a	1	0,346	5	15,894	3,973	3,977± 0,017	97,377
	2	0,348	5	15,986	3,996		97,941
	3	0,345	5	15,848	3,962		97,105
b	1	0,359	5	16,493	4,123	4,127 ± 0,017	101,054
	2	0,361	5	16,585	4,146		101,618
	3	0,358	5	16,447	4,112		100,779
ab	1	0,345	5	15,848	3,962	3,981 ± 0,024	97,105
	2	0,346	5	15,894	3,973		97,377
	3	0,349	5	16,032	4,008		98,236

% perolehan kembali = $\frac{\text{kadar obat yang diperoleh}}{\text{Kadar obat teoritis}} \times 100$

Kadar obat teoritis

Contoh : data formula -1 replikasi 1

$$= \frac{4,169}{4,135} \times 100 = 102,181 \%$$

4.08

LAMPIRAN I
HASIL ANAVA UJI PENETAPAN KADAR *PATCH* PROPRANOLOL HCL

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	12.404	4.134667	0.000914
Column 2	3	11.931	3.977	0.000301
Column 3	3	12.381	4.127	0.000301
Column 4	3	11.943	3.981	0.000577

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	0.069272	3	0.023091	44.12245	2.54E-05	4.066181
Within Groups	0.004187	8	0.000523			
Total	0.073459	11				

LAMPIRAN J
HASIL UJI PENETRASI *PATCH* PROPRANOLOL HCL

Formula -1

	t (jam)	Abs	Cn' (ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,069	3,381	27,4997
	0,50	0,079	3,7143	31,5438
	0,75	0,098	4,6190	39,2276
	1	0,119	5,6190	47,7201
	1,5	0,142	6,7143	57,0215
	2	0,186	8,8095	74,8155
	2,5	0,219	10,3810	88,1610
	3	0,301	14,2857	121,3224
	4	0,387	18,3810	156,1015
2	5	0,451	21,4286	181,9836
	6	0,563	26,7619	227,2773
	0,25	0,075	3,5238	29,9262
	0,50	0,087	4,0952	34,7791
	0,75	0,112	5,2857	44,8893
	1	0,131	6,1905	52,5730
	1,5	0,168	7,9524	67,5361
	2	0,219	10,3810	88,1610
	2,5	0,274	13,0000	110,4034
3	3	0,364	17,2857	146,8001
	4	0,429	20,3810	173,0866
	5	0,489	23,2381	197,3511
	6	0,595	28,2857	240,2184
	0,25	0,078	3,6667	31,1394
	0,50	0,089	4,1905	35,5879
	0,75	0,116	5,4762	46,5069
	1	0,123	5,8095	49,3378
	1,5	0,158	7,4762	63,4921
	2	0,211	10,0000	84,9257
	2,5	0,243	11,5238	97,8667
	3	0,329	15,6190	132,6458
	4	0,419	19,9048	169,0426
	5	0,473	22,4762	190,8806
	6	0,581	27,6190	234,5567

Formula a

	t (jam)	Abs	Cn' (ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,071	3,3333	28,3086
	0,50	0,086	4,0476	34,3747
	0,75	0,098	4,6190	39,2276
	1	0,113	5,3333	45,2937
	1,5	0,141	6,6667	56,6171
	2	0,211	10,0000	84,9257
	2,5	0,276	13,0952	111,2122
	3	0,354	16,8095	142,7560
	4	0,472	22,4286	190,4762
2	0,25	0,078	3,6667	31,1394
	0,50	0,095	4,4762	38,0144
	0,75	0,120	5,6667	48,1246
	1	0,134	6,3333	53,7863
	1,5	0,168	7,9524	67,5361
	2	0,227	10,7619	91,3962
	2,5	0,311	14,7619	125,3665
	3	0,392	18,6190	158,1235
	4	0,500	23,7619	201,7996
3	0,25	0,065	3,0476	25,8821
	0,50	0,074	3,4762	29,5218
	0,75	0,092	4,3333	36,8011
	1	0,121	5,7143	48,5290
	1,5	0,136	6,4286	54,5951
	2	0,216	10,2381	86,9477
	2,5	0,289	13,7143	116,4695
	3	0,387	18,3810	156,1015
	4	0,492	23,3810	198,5644
	5	0,597	28,3810	241,0272
	6	0,679	32,2857	274,1887

Formula b

	t (jam)	Abs	Cn' (ppm)	Qt (µg/cm²)
1	0,25	0,083	3,9048	33,1615
	0,50	0,109	5,1429	43,6761
	0,75	0,136	6,4286	54,5951
	1	0,184	8,7143	74,0067
	1,5	0,281	13,3333	113,2343
	2	0,368	17,4762	148,4178
	2,5	0,426	20,2381	171,8734
	3	0,517	24,5714	208,6746
2	4	0,638	30,3333	257,6079
	5	0,694	33,0000	280,2548
	6	0,743	35,3333	300,0708
	0,25	0,094	4,4286	37,6099
	0,50	0,124	5,8571	49,7422
	0,75	0,152	7,1905	61,0656
	1	0,168	7,9524	67,5361
	1,5	0,249	11,8095	100,2932
3	2	0,392	18,6190	158,1235
	2,5	0,412	19,5714	166,2117
	3	0,497	23,6190	200,5864
	4	0,618	29,3810	249,5198
	5	0,669	31,8095	270,1446
	6	0,762	36,2381	307,7545
	0,25	0,110	5,1905	44,0805
	0,50	0,128	6,0476	51,3598
3	0,75	0,164	7,7619	65,9185
	1	0,215	10,1905	86,5433
	1,5	0,237	11,2381	95,4403
	2	0,391	18,5714	157,7191
	2,5	0,474	22,5238	191,2850
	3	0,514	24,4286	207,4613
	4	0,653	31,0476	263,6740
	5	0,721	34,2857	291,1738
6	0,778	37,0000	314,2251	

Formula ab

	t (jam)	Abs	Cn' (ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,081	3,8095	32,3526
	0,50	0,099	4,6667	39,6320
	0,75	0,126	5,9524	50,5510
	1	0,137	6,4762	54,9995
	1,5	0,199	9,4286	80,0728
	2	0,238	11,2857	95,8447
	2,5	0,331	15,7143	133,4547
	3	0,409	19,4286	164,9985
2	4	0,482	22,9048	194,5203
	5	0,587	27,9048	236,9831
	6	0,688	32,7143	277,8283
	0,25	0,088	4,1429	35,1835
	0,50	0,102	4,8095	40,8452
	0,75	0,131	6,1905	52,5730
	1	0,145	6,8571	58,2348
	1,5	0,218	10,3333	87,7565
3	2	0,257	12,1905	103,5285
	2,5	0,335	15,9048	135,0723
	3	0,427	20,2857	172,2778
	4	0,493	23,4286	198,9688
	5	0,590	28,0476	238,1963
	6	0,691	32,8571	279,0416
	0,25	0,090	4,2381	35,9923
	0,50	0,111	5,2381	44,4849
3	0,75	0,137	6,4762	54,9995
	1	0,149	7,0476	59,8524
	1,5	0,227	10,7619	91,3962
	2	0,265	12,5714	106,7637
	2,5	0,354	16,8095	142,7560
	3	0,436	20,7143	175,9175
	4	0,517	24,5714	208,6746
	5	0,623	29,6190	251,5418
6	0,711	33,8095	287,1297	

LAMPIRAN K
HASIL UJI PELEPASAN *PATCH* PROPRANOLOL HCL
Formula -1

	t (jam)	Abs	Cn' (ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,082	3,8571	163,7853
	0,50	0,131	6,1905	262,8652
	0,75	0,148	7,0000	297,2399
	1	0,218	10,3333	438,7827
	1,5	0,237	11,2381	477,2015
	2	0,257	12,1905	517,6423
	2,5	0,298	14,1429	600,5460
	3	0,312	14,8095	628,8545
2	4	0,358	17,0000	721,8684
	5	0,403	19,1429	812,8602
	6	0,451	21,4286	909,9181
	0,25	0,073	3,4286	145,5869
	0,50	0,119	5,6190	238,6007
	0,75	0,138	6,5238	277,0195
	1	0,192	9,0952	386,2097
	1,5	0,202	9,5714	406,4301
3	2	0,249	11,8095	501,4660
	2,5	0,268	12,7143	539,8847
	3	0,304	14,4286	612,6782
	4	0,329	15,6190	663,2292
	5	0,379	18,0000	764,3312
	6	0,438	20,8095	883,6316
	0,25	0,069	3,2381	137,4987
	0,50	0,127	6,0000	254,7771
3	0,75	0,143	6,7619	287,1297
	1	0,195	9,2381	392,2758
	1,5	0,233	11,0476	469,1133
	2	0,245	11,6190	493,3778
	2,5	0,279	13,2381	562,1272
	3	0,318	15,0952	640,9868
	4	0,335	15,9048	675,3614
	5	0,393	18,6667	792,6398
6	0,445	21,1429	897,7859	

Formula a

	t (jam)	Abs	Cn' (ppm)	Qt ($\mu\text{g}/\text{cm}^2$)
1	0,25	0,097	4,5714	194,1159
	0,50	0,101	4,7619	202,2040
	0,75	0,123	5,8095	246,6889
	1	0,177	8,3810	355,8791
	1,5	0,231	10,9524	465,0693
	2	0,264	12,5238	556,0611
	2,5	0,318	15,0952	640,9868
	3	0,329	15,6190	663,2292
2	4	0,417	19,8095	841,1687
	5	0,565	26,8571	1140,4307
	6	0,629	29,9048	1269,8413
	0,25	0,102	4,8095	20,2261
	0,50	0,105	4,9524	210,2922
	0,75	0,115	5,4286	230,5126
	1	0,160	7,5714	321,5044
	1,5	0,248	11,7619	499,4439
3	2	0,279	13,2381	562,1272
	2,5	0,298	14,1429	600,5460
	3	0,308	14,6190	620,7664
	4	0,392	18,6190	790,6177
	5	0,579	27,5238	1168,7393
	6	0,632	30,0476	1275,9074
	0,25	0,108	5,0952	216,3583
	0,50	0,134	6,3333	268,9314
3	0,75	0,151	7,1429	303,3060
	1	0,182	8,6190	365,9893
	1,5	0,253	12,0000	509,5541
	2	0,287	13,6190	578,3035
	2,5	0,328	15,5714	661,2072
	3	0,340	16,1429	685,4716
	4	0,425	20,1905	857,3451
	5	0,581	27,6190	1172,7833
6	0,640	30,4286	1292,0837	

Formula b

	t (jam)	Abs	Cn' (ppm)	Qt (µg/cm²)
1	0,25	0,099	4,6667	198,1599
	0,50	0,110	5,1905	220,4024
	0,75	0,138	6,5238	277,0195
	1	0,154	7,2857	309,3722
	1,5	0,186	8,8095	374,0774
	2	0,196	9,2857	394,2978
	2,5	0,271	12,8571	545,9509
	3	0,285	13,5238	574,2594
2	4	0,346	16,4286	697,6039
	5	0,406	19,2857	818,9263
	6	0,548	26,0476	1106,0560
	0,25	0,107	5,0476	214,3363
	0,50	0,126	5,9524	252,7550
	0,75	0,157	7,4286	315,4383
	1	0,162	7,6667	325,5485
	1,5	0,192	9,0952	386,2097
3	2	0,224	10,6190	450,9150
	2,5	0,278	13,1905	560,1051
	3	0,293	13,9048	590,4357
	4	0,352	16,7143	709,7361
	5	0,416	19,7619	839,1467
	6	0,551	26,1905	1112,1221
	0,25	0,095	4,4762	190,0718
	0,50	0,116	5,4762	232,5346
3	0,75	0,132	6,2381	264,8873
	1	0,149	7,0476	299,2620
	1,5	0,168	7,9524	337,6807
	2	0,187	8,8571	376,0995
	2,5	0,241	11,4286	485,2897
	3	0,279	13,2381	562,1272
	4	0,337	16,0000	679,4055
	5	0,394	18,7143	794,6618
6	0,539	25,6190	1087,8576	

Formula ab

	t (jam)	Abs	Cn' (ppm)	Qt (µg/cm²)
1	0,25	0,094	4,4286	188,0497
	0,50	0,113	5,3333	226,4685
	0,75	0,127	6,0000	254,7771
	1	0,190	9,0000	382,1656
	1,5	0,272	12,9048	547,9729
	2	0,311	14,7619	626,8325
	2,5	0,375	17,8095	756,2430
	3	0,427	20,2857	861,3891
2	4	0,485	23,0476	978,6675
	5	0,511	24,2857	1031,2405
	6	0,597	28,3810	1205,1360
	0,25	0,113	5,3333	226,4685
	0,50	0,125	5,9048	250,7330
	0,75	0,143	6,7619	287,1297
	1	0,193	9,1429	388,2317
	1,5	0,251	11,9048	505,5101
3	2	0,319	15,1429	643,0088
	2,5	0,381	18,0952	768,3753
	3	0,411	19,5238	829,0365
	4	0,462	21,9524	932,1605
	5	0,509	24,1905	1027,1964
	6	0,582	27,6667	1174,8054
	0,25	0,100	4,7143	200,1820
	0,50	0,121	5,7143	242,6448
3	0,75	0,155	7,3333	311,3942
	1	0,208	9,8571	418,5623
	1,5	0,281	13,3333	566,1713
	2	0,329	15,6190	663,2292
	2,5	0,392	18,6190	790,6177
	3	0,436	20,7143	879,5875
	4	0,501	23,8095	1011,0201
	5	0,530	25,1905	1069,6593
6	0,601	28,5714	1213,2241	

LAMPIRAN L

ANALISA ANAVA PELEPASAN DENGAN FAKTORIAL DESAIN

Use your mouse to right click on individual cells for definitions.

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	9141.53	3	3047.18	308.97	< 0.0001	significant
A-HPMC	7879.69	1	7879.69	798.95	< 0.0001	
B-Menthol	146.30	1	146.30	14.83	0.0049	
AB1115.54	1	1	115.54	113.11	< 0.0001	
Pure Error	78.90	8	9.86			
Cor Total	9220.43	11				

The Model F-value of 308.97 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, 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.	3.14	R-Squared	0.9914
Mean	156.86	Adj R-Squared	0.9882
C.V. %	2.00	Pred R-Squared	0.9807
PRESS	177.52	Adeq Precision	38.901

The "Pred R-Squared" of 0.9807 is in reasonable agreement with the "Adj R-Squared" of 0.9882.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 38.901 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	Standard df	95% CI Error	95% CI Low	High
VIF					
Intercept	156.86	1	0.91	154.77	158.95
A-HPMC	25.62	1	0.91	23.53	27.72
1.00					
B-Menthol	3.49	1	0.91	1.40	5.58
1.00					
AB-9.64		1	0.91	-11.73	-7.55
1.00					

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Pelepasan} &= \\
 &+156.86 \\
 &+25.62 * A \\
 &+3.49 * B \\
 &-9.64 * A * B
 \end{aligned}$$

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 M

ANALISA ANAVA PENETRASI DENGAN FAKTORIAL DESAIN

Use your mouse to right click on individual cells for definitions.

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	306.20	3	102.07	87.93	< 0.0001 significant
<i>A-HPMC</i>	8.12	1	8.12	6.99	0.0295
<i>B-Menthol</i>	134.4	1	134.47	115.84	< 0.0001
<i>AB</i>	163.61	1	163.61	140.95	< 0.0001
Pure Error	9.29	8	1.16		
Cor Total	315.49	11			

The Model F-value of 87.93 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, 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.	1.08	R-Squared	0.9706
Mean	44.07	Adj R-Squared	0.9595
C.V. %	2.44	Pred R-Squared	0.9338
PRESS	20.89	Adeq Precision	22.635

The "Pred R-Squared" of 0.9338 is in reasonable agreement with the "Adj R-Squared" of 0.9595.

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

ratio of 22.635 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	Standard	95% CI	95% CI	High
	Estimate	df	Error	Low	
VIF					
Intercept	44.07	1	0.31	43.36	44.79
A-HPMC	0.82	1	0.31	0.11	1.54
1.00					
B-Menthol	3.35	1	0.31	2.63	4.06
1.00					
AB-3.69		1	0.31	-4.41	-2.98
1.00					

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 &\text{Penetrasi} \\
 &+44.07 \\
 &+0.82 \\
 &+3.35 \\
 &-3.69
 \end{aligned}
 =
 \begin{aligned}
 & \\
 &* A \\
 &* B \\
 &* A * B
 \end{aligned}$$

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 N

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 N

TABEL UJI F

Denominators for Degrees of Freedom	Numerator Degrees of Freedom								
	1	2	3	4	5	6	7	8	9
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5
2	18.81	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38
3	10.73	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04
120	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88

(Sumber: John E., 1992)

LAMPIRAN P
SERTIFIKASI ANALISIS BAHAN BAHAN

Propranolol HCl

kimia farma

Plani Jakarta
Jl. Rawagelam V No.1 Kawasan Industri Pulogadag
Telp. +62 21 4609354, 4603144 Fax. + 62 21 4603143
e-mail : dpj@cbn.net.id
Jakarta Timur 13930

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)	TGL.PEMBUATAN	: Mei 2008
	: PROPRANOLOL HCL	DALUARSA	: Mei 2013
MEREK/PRODUSEN	: Societa Italiana Medicine Scandicci Italy	PEMASOK	: PT.Menjangan Sakti
JUMI *4 KEMASAN	: 7 drum @ 25 kg = 175 kg	No.BATCH	: 28.051
JUM... / CONTOH	: 4 x 10 g (1 - 4)		

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 ^o konstan)	0,01%	Max.0,5 %	BP. 2003
Kadar	99,74%	-	BP. 2003
Kadar terhadap zat terering	99,75%	99,0 % - 101,0 %	BP. 2003

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

Apoteker Penanggung Jawab PM

Dra. Tia Mutianingsih

Jakarta,
Asman Pengawasan Mutu

Drs. Hadi Kardoko

Hydroxypropyl Methylcellulose (HPMC K4M)



Certificate 4962367 The Dow Chemical Company Page 1
 Date: 16.08.2010 Certificate of Analysis Shipped: 16.08.2010
 File Copy
 DOW CHEMICAL PACIFIC LIMITED Fax: COA ARCHIVE
 SHANGHAI PUDONG AIRPORT
 SHANGHAI SG 200004 CHINA Dlvly Note: 70695422 10
 Cust P.O.: 040/85/40183214
 Material: METHOCEL* K4M Premium Spec: 00053981-S
 Batch: YG13012N01 Mfgd: 13.07.2010 Retest Date: 12.07.2015
 Ship from: THE DOW CHEMICAL COMPANY BAY CITY MI UNITED STATES

It is hereby certified the material indicated above has been manufactured in accordance with the FDA's Current Good Manufacturing Practices, Kosher guidelines, was inspected and tested in accordance with the conditions and the requirements of current USP, EP and JP for Hypromellose as well as the current specific purity criteria for the food additive Hydroxypropyl Methyl Cellulose (E464) and unless agreed otherwise, conforms in all respects to the specification relevant thereto.

Feature	Units	Results		Limits	
		YG13012N01	Minimum	Maximum	
Apparent Viscosity	mPa.s	3,298	2,663	4,970	
Loss on Drying	%	3.2	----	5.0	
Residue on Ignition	%	0.5	----	1.5	
Ash, Sulfated	%	0.5	----	1.5	
pH, 2% in Water	-	6.3	5.0	8.0	
Assay, Methoxyl	%	22.6	19.0	24.0	
Assay, Hydroxypropoxyl	%	8.6	7.0	12.0	
Appearance, Opalescence		Passes	----	----	
Appearance, Solution Color		Passes	----	----	

Typical Properties: This batch, based on audit testing and process control, complies with the following additional specification requirements:
 Harmonized Identification Tests: Passes
 Residual Solvents: Passes
 Heavy Metals as PB: Not more than 20 ppm
 Microbiological Limits: Passes
 Batch (Lot) Number manufactured location: 2N = Midland, MI; 24 = Plaquemine, LA

Julie Wright

Julie Wright, PORTEFIBER, METHOCEL Quality Systems Specialist
 For inquiries please contact Customer Service at 1-800-232-2436 (USA).

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