LAMPIRAN A
HASIL UJI KERAPUHAN TABLET LEPAS LAMBAT IBUPROFEN

Formula	Replikasi	Berat awal	Berat akhir	Kerapuhan	Rata-Rata	SD	KV
I	1	15,4560	15,4527	0,0033	0,0036	0,0004	11,78
	2	15,4650	15,4611	0,0039			
II	1	15,9418	15,9355	0,0063	0,0082	0,0026	32,10
	2	15,4669	15,4562	0,011			
III	1	16,3427	16,3386	0,0041	0,0073	0,0045	61,99
	2	16,3427	16,3322	0,0105			
IV	1	15,5733	15,5588	0,0145	0,019	0,074	37,59
	2	15,7604	15,7354	0,025			

LAMPIRAN B
HASIL UJI KEKERASAN TABLET LEPAS LAMBAT IBUPROFEN

REPLIKASI I

No	Kekerasan tablet formula			
	I	II	III	IV
1	16,9	16,6	18,9	16,2
2	16,3	16,8	18,6	16,3
3	15,7	16,9	19	16
4	16	16,6	18,8	16,2
5	16,4	16,5	19	16,5
6	16,1	16,4	18,2	16,3
7	16	16,5	19	16,3
8	15,6	16,9	18	16,7
9	15,4	16,6	18,6	16,5
10	15,6	16,5	18,4	16,0
Rata-rata	16	16,63	18,65	16,3
SD	0.45	0,18	0,35	0,22
%KV	2,82	1,06	1,91	1,36

REPLIKASI II

No	Kekerasan tablet formula			
	I	II	III	IV
1	16,9	16,2	18,9	17,1
2	16,3	15,6	18,7	18
3	16,7	15,8	18,1	17,5
4	16	15,7	19	17,3
5	16,1	15,9	18,2	17,4
6	15,7	15,6	19	17,1
7	16	15,8	18,4	18,2
8	15,6	16	18,6	18,1
9	15,4	16,1	18,2	18,2
10	16	15,9	18,1	17,5
Rata-rata	16,07	15,86	18,52	17,64
SD	0,47	0,20	0,37	0,44
%KV	2,90	1,27	1,98	2,51

LAMPIRAN C
HASIL PENETAPAN KADAR TABLET LEPAS LAMBAT IBIPROFEN

Formula	Replikasi	Absorbansi	C sampel (µg/ ml)	C teoritis	Kadar (percent)	Rata-rata	SD	KV
1	1	0,7189	398,79	400,05	99,68	99,55	0,19	0,19
	2	0,7170	397,73	400,08	99,41			
2	1	0,7156	399,23	400,01	99,81	99,68	0,19	0,19
	2	0,7135	398,17	400,00	99,54			
3	1	0,7175	398,01	400,5	99,38	99,45	0,09	0,09
	2	0,7179	398,23	400,2	99,51			
4	1	0,7181	398,34	400,03	99,58	99,53	0,08	0,08
	2	0,7165	398,00	400,11	99,47			

LAMPIRAN D
CONTOH PERHITUNGAN

Contoh perhitungan sudut diam :

Formula 1:

W persegi panjang = 4,74 gram

W lingkaran = 1,38 gram

Luas persegi panjang = 21,5 x 27,9

= 588,85 cm

Luas lingkaran = 1,38/ 4,74 x 599,85 = 171,44

$A = \pi r^2$

$r^2 = A/\pi$

= 171,44/ 3,14 =54,60

r = 7,43 cm

$tg\alpha$ = t/r= 5,02/7,43 = 0,6756

α = 34,0°

Contoh perhitungan indeks kompresibilitas :

V1= 100ml

V2= 85ml

Indeks kompresibilitas = (1-V2/V1)x100% = 15%

Contoh perhitungan akurasi dan presisi :

Absorbansi = 0,5748→ y= Y= 0,004+$1,799x10^{-3}X$

C sampel = 318,43 ppm

C teoritis =320,00 ppm

% perolehan kembali = Csampel/Cteoritis x100%

= 318,43/320,00 x100%

= 99,51%

Untuk menghitung % KV = $SD/X_{rata\text{-}rata}$ x 100%

= (0,723/0,725)X100%

= 0,76%

Contoh perhitungan AUC pada disolusi :

Rumus = $(Wt_n+Wt_{n-1})/2 \times (t_n-t_{n-1})$

Formula 1

Wt_n= 37,2631

Wt_{n-1}=25,7201

t_n= 60 menit

t_{n-1}= 30 menit

AUC =(37,2631+25,7201)/2 x(60:30)

= 62,9832

Contoh perhitungan % ED $_{360}$:

Luas ■ = 360x rata-rata penetapan kadar x dosis

= 360 x 99,55% x 400

= 143352

% ED $_{360}$ = (∑ AUC/ luas ■) x100%

= (40442,05/ 143352) x 100%

= 28,21%

Contoh perhitungan % obat terlarut :

Formula 1

PK = 99,68%

% obat terlarut = (Wt/(PK/100 x dosis))x 100%

= (25,7201/(99,68% x 400))x100%

= 6,45%

Contoh perhitungan konversi dari bentuk tingkat menjadi bentuk sesungguhnya :

Misal : tingkat perbandingan konsentrasi HPMC K4M : *carrageenan* = level tinggi 4 ; dan tingkat rendah 1

X = X'- rata-rata 2 tingkat/(0,5x perbedaan level)

-0,75 = X'- ((4+1)/2) / 0,5x (4-1)

X' = 1,37

LAMPIRAN E
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN
FORMULA I

Replikasi	t (menit)	Absorbansi	C sampel (µg/ml)	Wt (mg)	AUC (mg.menit)
I	30	0,0550	28,5779	25,7201	385,80
	60	0,0780	41,4034	37,2631	944,75
	90	0,1211	65,4371	58,8934	1442,35
	120	0,2201	120,6424	108,5782	2512,07
	180	0,2216	121,4788	109,3309	6537,27
	240	0,2784	153,1521	137,8369	7415,03
	300	0,3519	194,1378	174,7240	9376,83
	360	0,4412	243,9341	219,5407	11827,94
					∑ 40442,05
2	30	0,0536	27,7972	25,0175	375,26
	60	0,0752	39,8420	35,8578	913,13
	90	0,1128	60,8088	54,7279	1358,79
	120	0,1575	85,7348	77,1613	1978,34
	180	0,2167	118,7464	106,8718	5520,99
	240	0,2772	152,4830	137,2347	7323,20
	300	0,3409	188,0039	169,2035	9193,15
	360	0,4144	228,9896	206,0906	11258,82
					∑ 37921,67

LAMPIRAN F
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN FORMULA II

Replikasi	t (menit)	Absorbansi	C sampel (µg/ml)	Wt (mg)	AUC (mg.menit)
I	30	0,1698	92,5937	83,3343	1250,01
	60	0,1857	101,4599	91,3140	2619,72
	90	0,2219	121,6461	109,4815	3011,93
	120	0,2601	142,9475	128,6528	3572,01
	180	0,3036	167,2044	150,4839	8374,10
	240	0,3566	196,7587	177,0828	9827,00
	300	0,4017	221,9077	199,2768	11290,79
	360	0,4606	256,7521	229,2768	12856,61
					∑ 52802,18
2	30	0,1482	80,5489	72,4940	1087,41
	60	0,1849	101,0138	90,9124	2451,10
	90	0,2145	117,5197	105,7677	2950,20
	120	0,2644	145,3453	130,8108	3548,68
	180	0,3098	170,6617	153,5955	8532,19
	240	0,3687	203,5060	183,1554	10102,53
	300	0,4221	233,2834	209,9550	11793,31
	360	0,4858	268,8043	241,9239	13556,37
					∑ 54021,78

LAMPIRAN G
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN FORMULA III

Replikasi	t (menit)	Absorbansi	C sampel (µg/ml)	Wt (mg)	AUC (mg.menit)
I	30	0,0734	38,8383	34,9545	524,32
	60	0,0930	49,7678	44,7910	1196,18
	90	0,1283	69,4521	62,5069	1609,47
	120	0,1863	101,7945	91,6151	2311,83
	180	0,2112	115,6795	104,1116	5871,80
	240	0,2631	144,6204	130,1584	7028,10
	300	0,2863	157,5574	141,8017	8158,80
	360	0,3157	173,9517	156,5565	8950,75
					∑ 35651,25
2	30	0,0626	32,8159	29,5343	443,01
	60	0,0760	40,2881	36,2593	986,90
	90	0,1025	55,0653	49,5588	1287,27
	120	0,1313	71,1250	64,0125	1703,57
	180	0,2021	91,3669	82,2302	4387,28
	240	0,2036	111,4415	100,2974	5475,83
	300	0,3383	130,7912	117,7121	6540,29
	360	0,4003	159,5091	143,5582	7838,11
					∑ 28662,26

LAMPIRAN H
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN FORMULA IV

replikasi	t (menit)	Absorbansi	C sampel (µg/ml)	Wt (mg)	AUC (mg.menit)
I	30	0,1611	87,7423	78,9681	1184,52
	60	0,1763	96,2182	86,5964	2483,47
	90	0,2003	109,6013	98,6412	2778,56
	120	0,2325	127,5570	114,8013	3201,64
	180	0,2618	143,8955	129,5059	7329,22
	240	0,2898	159,5091	143,5582	8191,92
	300	0,3186	175,5688	158,0119	9047,10
	360	0,3580	197,5394	177,7855	10073,92
					∑ 44290,35
2	30	0,1248	67,5004	60,7504	911,26
	60	0,1293	70,0097	63,0087	1856,39
	90	0,1548	84,2292	75,8063	2082,23
	120	0,1829	99,8986	89,9087	2485,73
	180	0,2120	116,1256	104,5130	5832,65
	240	0,2505	137,5943	123,8349	6850,44
	300	0,2731	150,1967	135,1770	7770,36
	360	0,3175	174,9554	154,4599	8689,11
					∑ 36478,14

LAMPIRAN I

UJI F KURVA BAKU PENETAPAN KADAR

Uji Kesamaan Regresi ibuprofen

REPLIKASI I

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
21,06	0,055	443,5236	0,003025	1,341659
31,59	0,076	997,9281	0,005776	5,764033
42,12	0,098	1774,0944	0,009604	17,0384
52,45	0,083	2751,0025	0,006889	18,95166
104,9	0,172	11004,01	0,029584	325,5426
209,8	0,377	44016,04	0,142129	6255,956
314,7	0,540	9036,09	0,2916	2634,924
419,6	0,747	176064,16	0,558009	98245,39
524,5	0,968	275100,25	0,937024	257775,5
629,4	1,136	396144,36	1,290496	511222,7
		917331,5	3,274136	876503,2

REPLIKASI II

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
21,2	0,045	449,44	0,002025	0,910116
31,8	0,128	1011,24	0,016384	16,56816
42,4	0,140	1797,76	0,0196	35,2361
53,2	0,172	2830,24	0,029584	83,72982
106,4	0,282	11320,96	0,079524	900,288
212,8	0,431	45283,84	0,185761	8411,971
319,2	0,627	101888,64	0,393129	40055,38
425,6	0,825	181135,36	0,680625	123285,3
532,0	1,033	283024	1,067089	302011,8
638,4	1,225	407554,56	1,500625	611586,6
		1036296	3,974346	1086388

REPLIKASI III

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
21,02	0,095	441,8404	0,009025	3,98761
31,53	0,128	994,1409	0,016384	16,288
42,04	0,140	1767,3616	0,0196	34,64029
51,5	0,082	2652,25	0,006724	17,83373
100,0	0,179	10000	0,032041	320,41
206,0	0,352	42436	0,123904	5257,99
309,0	0,497	95481	0,247009	23584,67
412,0	0,671	412	0,450241	185,4993
515,0	0,871	265225	0,758641	201210,6
618,0	1,101	381924	1,212201	462968,7
		801333,6	2,87577	693600,5

LAMPIRAN J
HASIL KEKERASAN TABLET LEPAS LAMBAT IBIPROFEN

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	2	32.07	16.035	0.00245
Column 2	2	32.49	16.245	0.29645
Column 3	2	37.17	18.585	0.00845
Column 4	2	33.94	16.97	0.8978

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	8.015137	3	2.671713	8.867651	0.030601	6.591382
Within Groups	1.20515	4	0.301288			
Total	9.220287	7				

Karena F hitung = 8,86 > F tabel $_{0,05\ (3,4)}$ = 6,59 ; maka H_0 di tolak dan ada perbedaan bermakna antar formula

Descriptives

Kekerasan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	10	16.0000	.45216	.14298	15.6765	16.3235	15.40	16.90
b	10	16.6300	.17670	.05588	16.5036	16.7564	16.40	16.90
c	10	18.6500	.35668	.11279	18.3948	18.9052	18.00	19.00
d	10	16.3000	.22111	.06992	16.1418	16.4582	16.00	16.70
Total	40	16.8950	1.09497	.17313	16.5448	17.2452	15.40	19.00

Test of Homogeneity of Variances

Kekerasan

Levene Statistic	df1	df2	Sig.
2.715	3	36	.059

ANOVA

Kekerasan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	43.053	3	14.351	139.405	.000
Within Groups	3.706	36	.103		
Total	46.759	39			

Post Hoc Tests

Multiple Comparisons

Kekerasan

Tukey HSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	B	-.63000*	.14349	.001	-1.0164	-.2436
	C	-2.65000*	.14349	.000	-3.0364	-2.2636
	D	-.30000	.14349	.175	-.6864	.0864
B	a	.63000*	.14349	.001	.2436	1.0164
	c	-2.02000*	.14349	.000	-2.4064	-1.6336
	d	.33000	.14349	.117	-.0564	.7164
C	a	2.65000*	.14349	.000	2.2636	3.0364

	b	2.02000*	.14349	.000	1.6336	2.4064
	d	2.35000*	.14349	.000	1.9636	2.7364
D	a	.30000	.14349	.175	-.0864	.6864
	b	-.33000	.14349	.117	-.7164	.0564
	c	-2.35000*	.14349	.000	-2.7364	-1.9636

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Kekerasan

Tukey HSD[a]

formul a	N	Subset for alpha = 0.05		
		1	2	3
a	10	16.0000		
d	10	16.3000	16.3000	
b	10		16.6300	
c	10			18.6500
Sig.		.175	.117	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

LAMPIRAN K
HASIL UJI KERAPUHAN TABLET LEPAS LAMBAT IBUPROFEN

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	2	0,0072	0,0036	1,8E-07
Column 2	2	0,0163	0,00815	6,85E-06
Column 3	2	0,0146	0,0073	2,05E-05
Column 4	2	0,0395	0,01975	5,51E-05

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,000293	3	9,76E-05	4,333869	0,083883	6,591382
Within Groups	8,26E-05	4	2,07E-05			
Total	0,000375	7				

Karena F hitung = 0,433 <F tabel $_{0,05(3,4)}$ = 6,59; maka H_0 diterima dan tidak ada perbedaan bermakna antar formula

LAMPIRAN L
HASIL PENETAPAN KADAR TABLET LEPAS LAMBAT IBIPROFEN

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	2	199,09	99,545	0,03645
Column 2	2	199,35	99,675	0,03645
Column 3	2	199,05	99,525	0,00605
Column 4	2	198,89	99,445	0,00845

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,05455	3	0,018183	0,832189	0,541757	6,591382
Within Groups	0,0874	4	0,02185			
Total	0,14195	7				

Karena F hitung = 0,83 < F tabel $_{0,05\ (3,4)}$ = 6,59 ; maka H_0 diterima dan tidak ada perbedaan bermakna antar formula

LAMPIRAN M
HASIL UJI STATISTIK % DE $_{360}$

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	2	54,66	27,33	1,5488
Column 2	2	74,43	37,215	0,36125
Column 3	2	48,9	24,45	39,4272
Column 4	2	56,35	28,175	14,85125

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	182,6321	3	60,87735	4,333794	0,095252	6,591382
Within Groups	56,1885	4	14,04713			
Total	238,8206	7				

Karena F hitung =4,333 > F tabel $_{0,05(3,4)}$ = 6,49 ; tidak ada perbedaan bermakna antar formula

LAMPIRAN N
SERTIFIKAT ANALISIS IBU PROFEN

Shasun Chemicals And Drugs Ltd.

IBUPROFEN BP/Ph.Eur. (SN Grade)
CERTIFICATE OF ANALYSIS

Nature of Packing	: Sea Worthy Fibre Drum	Analytical Report No.	: FPIBU0607674
Sample Taken By	: S.Sivakumar	Batch Number	: IBU0607674
Date of Manufacture	: July 2006	Date of Analysis	: 25-07-2006
Expiry Date	: June 2011	Date of Report	: 25-07-2006
Batch Volume(Qty)	: 3000 Kg.	Manufactured By	: Shasun Chemicals And Drugs Limited, Pondicherry.

S.No	TESTS	RESULTS	LIMITS
1.	Appearance	White crystalline powder	White, crystalline powder or colourless crystals
2.	Solubility	Complies	Freely soluble in acetone, in methanol and in methylene chloride. Dissolves in dilute solutions of alkali hydroxides and carbonates. Practically insoluble in water
3.	Clarity and colour of solution	Complies	10 % w/v solution (5g in 50 mL of the solution) in methanol should be clear and colourless
4.	Identification		
	a]By IR	Conforms	The IR spectrum of sample should be concordant with the spectrum of Ibuprofen RS
	b]By UV	1.24 1.03	The ratio of absorbance at the max.at 264 nm to that at 258 nm is 1.20 to 1.30 The ratio of absorbance at the max at 272 nm to that at 258 nm is 1.00 to 1.10
	c] By TLC	Complies	Principal spot should be similar in position, colour and size compared to Ibuprofen RS
	d]Melting point	76.1 °C	75.0°C to 78.0 °C
5.	Optical rotation	0.00 °	- 0.05° to +0.05°
6.	Heavy metals	LT 10 PPM	NMT 10 PPM
7.	Related substances (by HPLC)		
	a] 2-(4-Isobutyryl Phenyl) Propanoic Acid (Impurity J)	0.06 % (Area %)	NMT 0.20 % (Area %)
	b] 2-(4-Butyl phenyl)propanoic acid (Impurity B)	Not Detected	NMT 0.30 % (w/w)
	c]4-Isobutylacetophenone (Impurity E)	Not Detected	NMT 0.30 % (Area %)
	d] Any unidentified impurity	0.04 % (Area %)	NMT 0.10 % (Area %)
	e] Total impurities (Apart from impurity B)	0.14 % (Area %)	NMT 0.50 % (Area %)
8.	Sulphated ash	0.04 % (w/w)	NMT 0.10 % (w/w)
9.	Loss on drying	0.10 % (w/w)	NMT 0.50 % (w/w)
10.	Assay (dry basis)	99.8 % (w/w)	98.5 % -101.0 % (w/w)

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Shasun Road, Periyakalapet, Pondicherry - 605 014. India
Ph : 91-413-2655202, 2655156, 2655157, 2655441, 2655442
2655827, 2655828, 2655829, 2655830
Fax : 091 - 413 - 2655154, e-mail : shapondy@md4.vsnl.net.in
shapdy@shasun.com

LAMPIRAN O

Sertifikat Analisis Laktosa

DMV INTERNATIONAL

Certificate of analysis

Issue date
18.02.2005
Purchase order
002879/PH/01578
Delivery item
80270238 000020
Order item
231054 000020
Total Quantity Item
16.000 KG

Lot: 10209286
Manufacture date: 01.2005

Quantity: 16.000 KG
Expiry date: 12.2007

Characteristic	Unit	SPECIFICATION Lower Limit	Upper Limit	Value
Particle size (PSD) % ≤250 µm	%	99,0	100,0	100,0
Standard plate count	cfu/g	0	100	<10
Yeasts and Moulds	cfu/g	0	10	<10
Enterobacteriaceae	cfu/g	0	1	0
E. coli in 10 g				negative
Salmonella in 100g				negative

J. Hermans
QA Manager

(This is an electronic document)

LAMPIRAN P
SERTIFIKAT MAGNESIUM STEARAT

PETER GREVEN
Partner der Industrie

QUALITÄTSMANAGEMENT

CERTIFICATE OF ANALYSIS

customer: PT BRATACO
contact person:
FAX:
your order-number: PTB0735/V1104 **our order-number:** 4011746
delivered on: 04.08.2004 **quantity:** 9000
brand: LIGA MAGNESIUM STEARATE MF-2-V VEGETABLE **charge-no.** C447176
manufacturing date: 2004-07-19 **expiry date:** 2006-07-19

product is in accordance with the USP27/NF22/BP2003/Ph.Eur 4rd ed./DAB10/JP 14th. ed./FCC 5th. ed.

parameter	unit	method	result
ntification A	oC	Ph.Eur	59
stion A	metal reaction	USP/NF	passes test
tification B	retention time GC	USP/NF	retentions match
idity or	ml 0,01N HCl	Ph.Eur	<0,5
alinity	ml 0.01 N NaOH	Ph.Eur	<0,5
avy metals as Pb	ppm	JP	<20
ad	ppm	BAE 300-B	<1
dmium	ppm	BAE 300-B	<1
ckel	ppm	BAE 300-B	<1
hloride	%	Ph.Eur	<0,1
ulphate	%	Ph.Eur	<0,5
id value of the fatty acid	mg KOH/g	Ph.Eur	204,8
lative content of stearic acid	%	USP/NF	65,1
l. cont. of stearic and palmetic acid	%	USP/NF	98,9
robic microbial count	cfu/g	USP/NF	<10
lds & Yeasts	cfu/g	USP/NF	105
cherichia coli	cfu/g	USP/NF	absent
nella Species	cfu/g	USP/NF	absent
ganic volatile impurties		USP/NF	meets USP/NF
s on drying	%	BAE 600	3,9
gnesium content	%	BAE 200 o	4,7
e fatty acid	%	BAE 400	0,6
ve residue at 200 mesh	%	BAE 605	0,2
lk density tapped	g/ml	BAE 611a	0,32
ecific surface area BET	qm/g	USP/NF	10,0
ntamination		BAE 601	in accordance

Venlo, 27.08.04

datas of the obove mentioned delivery are based upon careful test according to the guidlines of our lity assurance system. They do not release the customer from entry control. Besides we do not garantee zial properties for concrete applications.
certificate was issued by EDV and does not bear a signature.

BRATACO
IMPORTER
MANUFACTURER
DISTRIBUTOR

LAMPIRAN Q
SERTIFIKAT TALK

SUN PLAN DEVELOPMENT LTD.

CERTIFICATE OF ANALYSIS

INVOICE NO. 1514

TO: PT BRATACO JL. KELENTENG NO. 5
BANDUNG QQ PT.BRATACO JL. MANGGA
BESAR V/5 JAKARTA, INDONESIA
NPWP.01.130.689.1-032.001

RE: 48 MT TALC POWDER HAICHEN SHIPPED PER V.SL "HUANDAO " V.3192 FROM BAYUQUAN,
CHINA SEAPORT TO TG.PRIOK PORT, JAKARTA, INDONESIA ON/ABOUT 18 OCT 2003
DRAWN UNDER IRREVOCABLE DC NO.02/03U/0645 DD 19SEPT03 OF BANK NISP PT (SWIFT
ADDRESS : NISPIDJA)

COMMODITY : TALC POWDER HAICHEN
QUANTITY : 48 MT

SiO2 :	60.1%
MgO :	30.8%
WHITENESS :	92.8%
CaO :	0.4%
TiO3 :	0.26%
Al2O3 :	0.3%
LOI :	6.0%
FINENESS :	98.5% PASSING THROUGH 325 MESH
PH :	7-9
MOISTURE :	0.38%
ASBESTOS :	FREE

BRATACO
IMPORTER
MANUFACTURER
DISTRIBUTOR

LAMPIRAN R

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 S

TABEL UJI HSD (0,05)

d.k. \ k	2	3	4	5	6	7	8	9	10	11
5	3.64	4.60	5.22	5.67	6.03	6.33	6.58	6.80	6.99	7.17
6	3.46	4.34	4.90	5.30	5.63	5.90	6.12	6.32	6.49	6.65
7	3.34	4.16	4.68	5.06	5.36	5.61	5.82	6.00	6.16	6.30
8	3.26	4.04	4.53	4.89	5.17	5.40	5.60	5.77	5.92	6.05
9	3.20	3.95	4.41	4.76	5.02	5.24	5.43	5.59	5.74	5.87
10	3.15	3.88	4.33	4.65	4.91	5.12	5.30	5.46	5.60	5.72
11	3.11	3.82	4.26	4.57	4.82	5.03	5.20	5.35	5.49	5.61
12	3.08	3.77	4.20	4.51	4.75	4.95	5.12	5.27	5.39	5.51
13	3.06	3.73	4.15	4.45	4.69	4.88	5.05	5.19	5.32	5.43
14	3.03	3.70	4.11	4.41	4.64	4.83	4.99	5.13	5.25	5.36
15	3.01	3.67	4.08	4.37	4.59	4.78	4.94	5.08	5.20	5.31
16	3.00	3.65	4.05	4.33	4.56	4.74	4.90	5.03	5.15	5.26
17	2.98	3.63	4.02	4.30	4.52	4.71	4.86	4 99	5.11	5.21
18	2.97	3.61	4.00	4.28	4.49	4.67	4.82	4.96	5.07	5.17
19	2.96	3.59	3.98	4.25	4.47	4.65	4.79	4.92	5.04	5.14
20	2.95	3.58	3.96	4.23	4.45	4.62	4.77	4.90	5.01	5.11
24	2.92	3.53	3.90	4.17	4.37	4.54	4.68	4.81	4.92	5.01
30	2.89	3.49	3.85	4.10	4.30	4.46	4.60	4.72	4.82	4.92
40	2.86	3.44	3.79	4.04	4.23	4.39	4.52	4.63	4.73	4.82
60	2.83	3.40	3.74	3.98	4.16	4.31	4.44	4.55	4.65	4.73
120	2.80	3.36	3.68	3.92	4.10	4.24	4.36	4.47	4.56	4.64
∞	2.77	3.31	3.63	3.86	4.03	4.17	4.29	4.39	4.47	4.55

Catatan kaki: Dari *Annals of mathematical statistics.* Diulang cetak seizin penerbit, The Institute of Mathematical Statistics.

Sumber: Schefler (1987).

LAMPIRAN T

Tabel Distribusi F

Denomins 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)

Dikutip dari: Gennaro, A.R. (1970)

LAMPIRAN U
ANOVA PERSEN OBAT LARUT 3 JAM

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

Response 1 Obat Terlarut 180

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	201.78	3	67.26	4.84	0.0809
not significant					
A-Carrageenan-HPMC	*61.22*	*1*	*61.22*	*4.41*	*0.1038*
B-Laktosa-Avicel	*119.27*	*1*	*119.27*	*8.59*	*0.0428*
AB	*21.29*	*1*	*21.29*	*1.53*	*0.2835*
Pure Error	55.57	4	13.89		
Cor Total	257.35	7			

The Model F-value of 4.84 implies there is a 8.09% 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.	3.73	R-Squared	0.7841
Mean29.87	Adj R-Squared	0.6221	
C.V. %	12.48	Pred R-Squared	0.1362
PRESS	222.29	Adeq Precision	5.029

The "Pred R-Squared" of 0.1362 is not as close to the "Adj R-Squared" of 0.6221 as one might normally expect. This may indicate a large block effect or a possible problem with your model and/or data. Things to consider are model reduction, response transformation, outliers, etc.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 5.029 indicates an adequate signal. This model can be used to navigate the design space.

Coefficient Factor	Estimate	Standard df	95% CI Error	95% CI Low	95% CI High	VIF
Intercept	29.87	1	1.32	26.21	33.53	
A-Carrageenan-HPMC	-2.77	1	1.32	-6.43	0.89	1.00
B-Laktosa-Avicel	3.86	1	1.32	0.20	7.52	1.00
AB-1.63	1	1.32	-5.29	2.03	1.00	

Final Equation in Terms of Coded Factors:

Obat Terlarut 180 =
+29.87
-2.77 * A
+3.86 * B
-1.63 * A * B

Final Equation in Terms of Actual Factors:

Obat Terlarut 180 =
+29.87125
-2.76625 * Carrageenan-HPMC
+3.86125 * Laktosa-Avicel
-1.63125 * Carrageenan-HPMC * Laktosa-Avicel

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 V
ANOVA PERSENT OBAT LARUT 6 JAM

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

Response 2 Obat Terlarut 360

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	505.12	3	168.37	12.85	0.0160
significant					
A-Carrageenan-HPMC	*468.79*	*1*	*468.79*	*35.79*	*0.0039*
B-Laktosa-Avicel	*30.03*	*1*	*2.29*	*30.03*	*0.2045*
AB	*6.30*	*1*	*6.30*	*0.48* *0.5261*	
Pure Error	52.39	4	13.10		
Cor Total	557.52	7			

The Model F-value of 12.85 implies the model is significant. There is only a 1.60% 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 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.	3.62	R-Squared	0.9060
Mean48.61		Adj R-Squared	0.8355
C.V. %	7.45	Pred R-Squared	0.6241
PRESS	209.58	Adeq Precision	7.497

The "Pred R-Squared" of 0.6241 is not as close to the "Adj R-Squared" of 0.8355 as one might normally expect. This may indicate a large block effect or a possible problem with your model and/or data. Things to consider are model reduction, response transformation, outliers, etc.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 7.497 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	95% CI High	VIF
Intercept	48.61	1	1.28	45.06	52.16	
A-Carrageenan-HPMC	-7.66	1	1.28	-11.21	-4.10	1.00
B-Laktosa-Avicel	1.94	1	1.28	-1.62	5.49	1.00
AB-0.89	1	1.28	-4.44	2.67	1.00	

Final Equation in Terms of Coded Factors:

Obat Terlarut 360 =
+48.61
-7.66 * A
+1.94 * B
-0.89 * A * B

Final Equation in Terms of Actual Factors:

Obat Terlarut 360 =
+48.61000
-7.65500 * Carrageenan-HPMC
+1.93750 * Laktosa-Avicel
-0.88750 * Carrageenan-HPMC * Laktosa-Avicel

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.