

LAMPIRAN A
HASIL UJI MUTU FISIK GRANUL

Pengujian	Replikasi	Formula			
		1	2	3	4
Kadar air (persen)	I	3,83	4,12	3,52	3,65
	II	4,10	3,75	3,71	3,59
	III	3,95	3,84	3,89	3,78
	Rata-rata	3,96	3,90	3,71	3,67
	SD	0,14	0,19	0,18	0,10
Waktu alir (detik)	I	9,8	9,6	9,8	9,7
	II	9,9	9,7	9,9	9,6
	III	9,7	9,5	9,9	9,7
	Rata-rata	9,8	9,6	9,9	9,7
	SD	0,10	0,10	0,06	0,06
Sudut diam (derajat)	I	31,8	32,8	32,3	30,9
	II	32,2	33	31,5	31,4
	III	31,4	32,5	32,5	31,8
	Rata-rata	31,80	32,77	32,10	31,37
	SD	0,40	0,25	0,53	0,45
Indeks kompresibilitas (persen)	I	17	16	17	16
	II	18	16	17	16
	III	17	17	16	18
	Rata-rata	17,33	16,33	16,67	16,67
	SD	0,58	0,58	0,58	1,15

LAMPIRAN B
HASIL UJI KEKERASAN TABLET LEPAS LAMBAT IBUPROFEN

Replikasi I

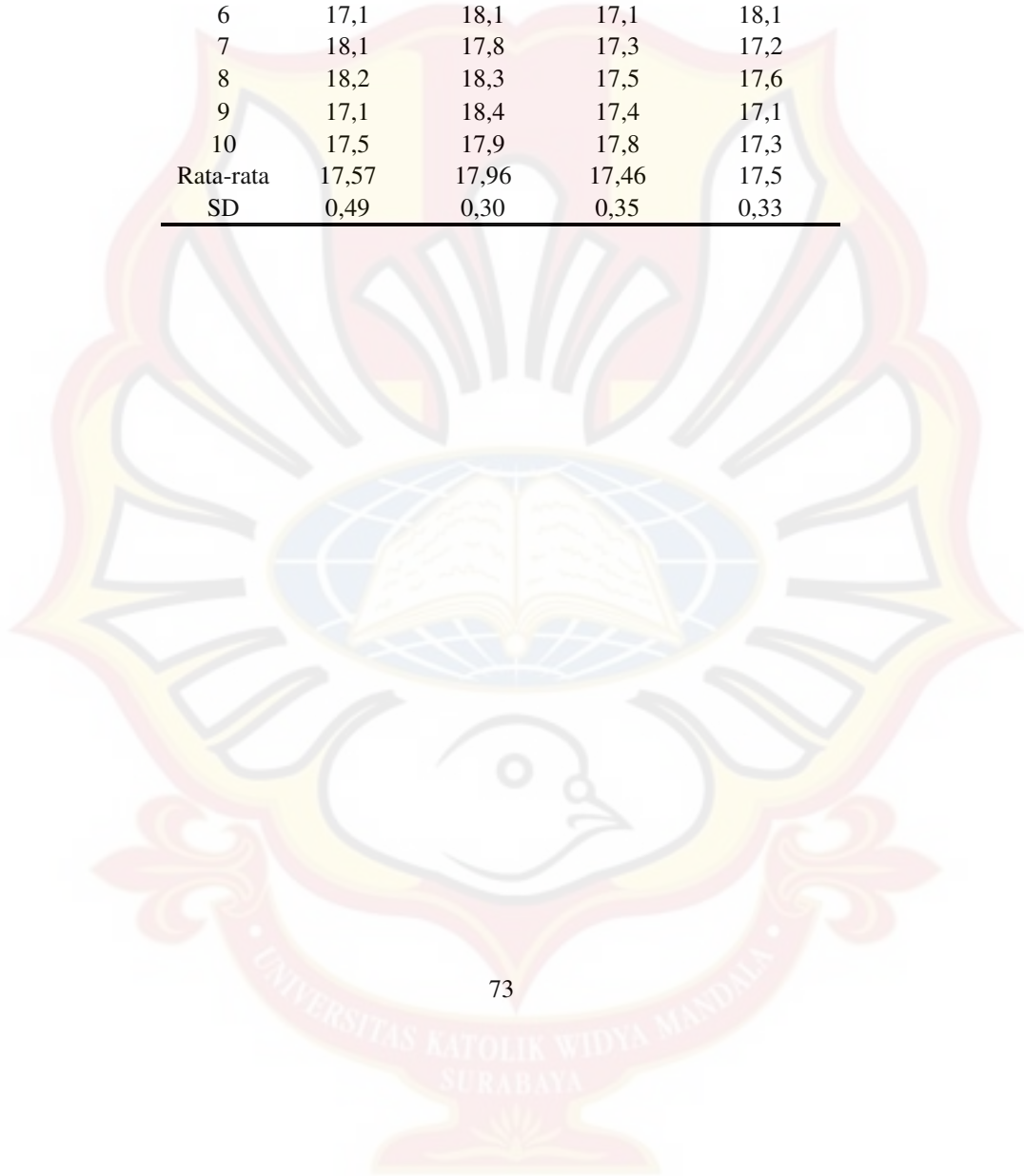
No	Kekerasan tablet formula			
	1	2	3	4
1	17,0	18,2	18,3	17,8
2	17,8	18,4	17,5	17,2
3	18,3	17,8	18,2	17,9
4	18,2	17,5	17,9	18,1
5	18,1	18,1	17,8	17,8
6	18,5	17,9	17,6	17,4
7	18,8	18,0	18,1	17,5
8	18,5	17,8	18,2	17,8
9	18,2	17,9	18,0	17,7
10	18,4	17,6	17,9	17,9
Rata-rata	18,18	17,92	17,95	17,71
SD	0,49	0,27	0,26	0,27

Replikasi II

No	Kekerasan tablet formula			
	1	2	3	4
1	17,4	18,2	17,5	17,5
2	16,6	18,4	17,4	17,2
3	17,0	17,8	17,0	17,1
4	18,3	17,5	17,0	16,9
5	17,9	17,9	17,2	17,5
6	16,5	18,0	17,1	17,4
7	16,4	18,4	17,3	16,8
8	18,2	18,2	17,1	17,9
9	17,8	17,9	17,4	18,0
10	17,3	17,8	17,2	17,6
Rata-rata	17,34	18,01	17,22	17,39
SD	0,70	0,29	0,18	0,40

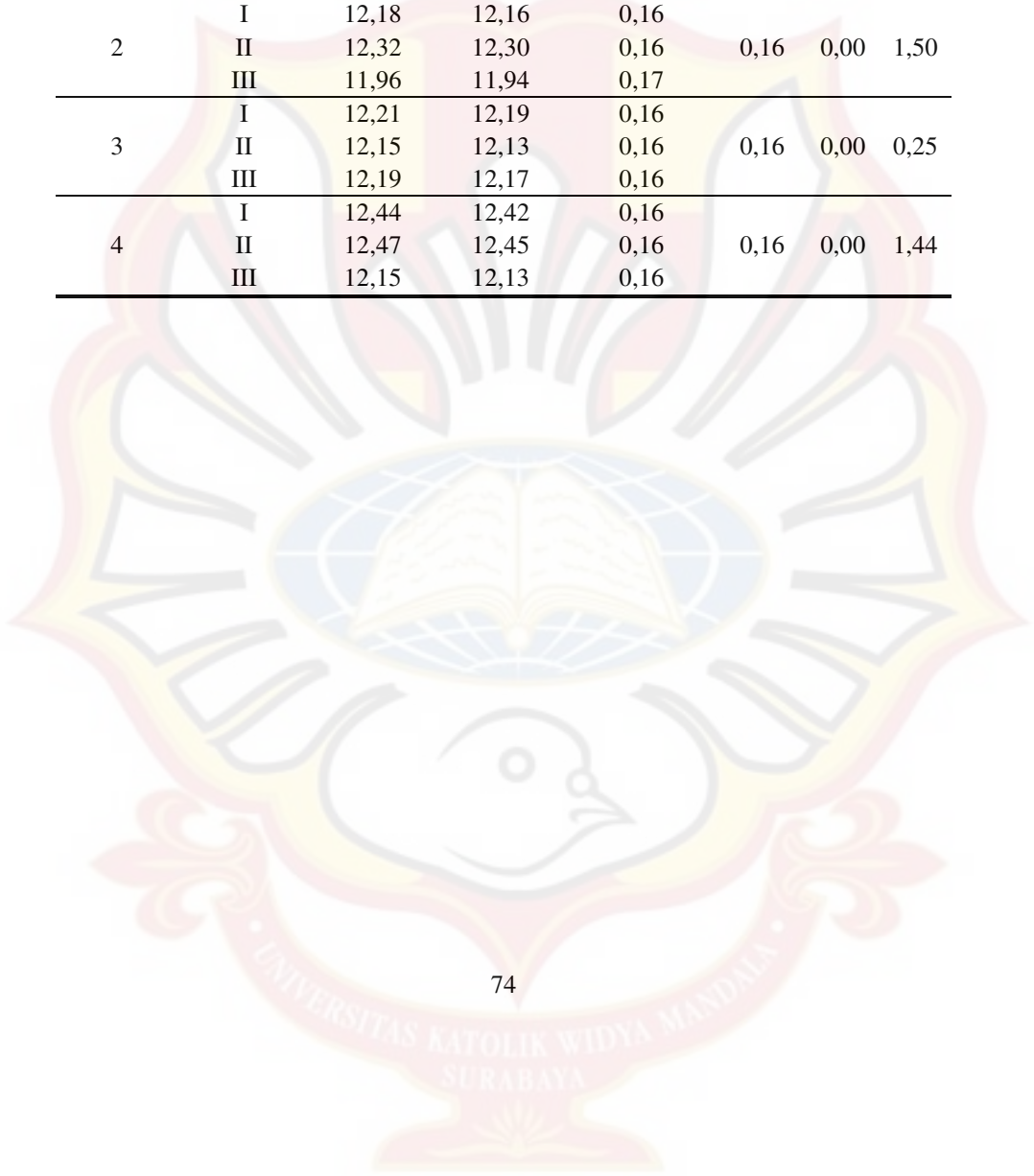
Replikasi III

No	Kekerasan tablet formula			
	1	2	3	4
1	17,8	17,5	17,1	17,6
2	17,2	17,5	17,0	17,6
3	17,3	17,9	17,7	17,5
4	17,1	18,1	17,6	17,9
5	18,3	18,1	18,1	17,1
6	17,1	18,1	17,1	18,1
7	18,1	17,8	17,3	17,2
8	18,2	18,3	17,5	17,6
9	17,1	18,4	17,4	17,1
10	17,5	17,9	17,8	17,3
Rata-rata	17,57	17,96	17,46	17,5
SD	0,49	0,30	0,35	0,33



LAMPIRAN C
HASIL UJI KERAPUHAN TABLET LEPAS LAMBAT IBUPROFEN

Formula	Replikasi	Berat awal (g)	Berat akhir (g)	Kerapuhan (persen)	Rata-rata	SD	KV
1	I	11,79	11,77	0,17	0,17	0,00	2,13
	II	12,30	12,28	0,16			
	III	11,98	11,96	0,17			
2	I	12,18	12,16	0,16	0,16	0,00	1,50
	II	12,32	12,30	0,16			
	III	11,96	11,94	0,17			
3	I	12,21	12,19	0,16	0,16	0,00	0,25
	II	12,15	12,13	0,16			
	III	12,19	12,17	0,16			
4	I	12,44	12,42	0,16	0,16	0,00	1,44
	II	12,47	12,45	0,16			
	III	12,15	12,13	0,16			



LAMPIRAN D
HASIL PENETAPAN KADAR TABLET LEPAS LAMBAT
IBUPROFEN

Formula	Replikasi	Absor- bansi	Csampil (µg/ml)	Cteoritis (µg/ml)	Kadar (persen)	Rata- rata	SD	KV
1	I	0,712	394,78	395,7	99,77	99,95	0,19	0,19
	II	0,727	403,17	402,6	100,14			
	III	0,716	397,02	397,2	99,95			
2	I	0,721	399,81	401,8	99,50	100,28	0,84	0,83
	II	0,722	400,37	399,7	100,17			
	III	0,722	400,37	395,8	101,16			
3	I	0,724	401,49	401,3	100,48	100,46	0,42	0,42
	II	0,723	400,93	400,8	100,03			
	III	0,720	399,26	395,8	100,87			
4	I	0,721	399,81	400,3	99,88	100,98	0,99	0,98
	II	0,725	402,05	397,1	101,25			
	III	0,726	402,61	395,5	101,80			

LAMPIRAN E
CONTOH PERHITUNGAN

Contoh perhitungan sudut diam:

Formula 1:

$$W \text{ persegi panjang} = 4,74 \text{ gram}$$

$$W \text{ lingkaran} = 1,37 \text{ gram}$$

$$\begin{aligned} \text{Luas persegi panjang} &= 21,5 \times 27,9 \\ &= 599,85 \text{ cm}^2 \end{aligned}$$

$$\text{Luas lingkaran} = \frac{1,37}{4,74} \times 599,85 = 173,37$$

$$A = \pi r^2$$

$$r^2 = \frac{A}{\pi}$$

$$= \frac{173,37}{3,14} = 55,21$$

$$r = 7,43 \text{ cm}$$

$$\text{tg } \alpha = \frac{t}{r} = \frac{4,61}{7,43} = 0,6205$$

$$\alpha = 31,8^\circ$$

Contoh perhitungan indeks kompresibilitas:

Formula 1:

$$V1 = 100 \text{ ml}$$

$$V2 = 83 \text{ ml}$$

$$\text{Indeks kompresibilitas} = \left(1 - \frac{V2}{V1}\right) \times 100\% = 17\%$$

Contoh perhitungan akurasi & presisi:

$$\text{Absorbansi} = 0,724 \rightarrow y = 6,6523 \cdot 10^{-3} + 1,7867 \cdot 10^{-3} x.$$

$$C_{\text{sampel}} = 401,49 \text{ ppm}$$

$$C_{\text{teoritis}} = 400,9 \text{ ppm}$$

$$\begin{aligned} \% \text{ perolehan kembali} &= \frac{C_{\text{sampel}}}{C_{\text{teoritis}}} \times 100\% \\ &= \frac{401,49}{400,9} \times 100\% \\ &= 100,15\% \end{aligned}$$

$$\begin{aligned} \text{Untuk menghitung } \%KV &= \frac{SD}{X} \times 100\% \\ &= 0,47\% \end{aligned}$$

Contoh perhitungan AUC pada disolusi:

$$\text{Rumus} = \frac{(W_{t_n} + W_{t_{n-1}})}{2} \times (t_n - t_{n-1})$$

Formula 1

$$W_{t_n} = 370,92$$

$$W_{t_{n-1}} = 359,83$$

$$t_n = 60 \text{ menit}$$

$$t_{n-1} = 30 \text{ menit}$$

$$\begin{aligned} AUC &= \frac{(370,92 + 359,83)}{2} \times (60 - 30) \\ &= 10961,25 \end{aligned}$$

Contoh perhitungan %DE₃₆₀:

$$\begin{aligned} \text{Luas} &= 360 \times \text{rata-rata penetapan kadar} \times \text{dosis} \\ &= 360 \times 99,95\% \times 400 \\ &= 143928 \end{aligned}$$

$$\%DE_{360} = \left(\frac{\Sigma AUC}{\text{luas}} \right) \times 100\%$$

$$= (124966,05 / 143928) \times 100\%$$

$$= 86,83\%$$

Contoh perhitungan %obat terlarut:

Formula 1

$$PK = 99,95\%$$

$$\% \text{ obat terlarut} = \frac{Wt}{\frac{PK}{100} \times \text{dosis}} \times 100\%$$

$$= \frac{359,83}{\frac{99,95}{100} \times 400} \times 100\%$$

$$= 90,00\%$$

Contoh perhitungan konversi dari bentuk level menjadi bentuk sesungguhnya:

Misal : level PVP K-30 = -0,91; level rendah = 3%; level tinggi = 5%

$$X = \frac{X' - \text{rata} - \text{rata 2 level}}{\frac{1}{2} \times \text{perbedaan level}}$$

$$-0,91 = \frac{X' - \left(\frac{3+5}{2}\right)}{\frac{1}{2} \times (5-3)}$$

$$X' = 3,09$$

LAMPIRAN F
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN
FORMULA 1

Replikasi	t (menit)	Absorbansi	Csampil ($\mu\text{g/ml}$)	Wt (mg)	AUC (mg.menit)
I	30	0,721	399,81	359,83	5397,45
	60	0,743	412,13	370,92	10961,25
	90	0,717	397,58	357,82	10931,10
	120	0,726	402,61	362,35	10802,55
	180	0,718	398,14	358,33	21620,40
	240	0,727	403,17	362,85	21635,40
	300	0,737	108,77	367,89	21922,20
	360	0,712	394,78	355,30	21695,70
					$\Sigma = 124966,05$
II	30	0,730	404,85	364,37	5465,55
	60	0,717	397,58	357,82	10832,85
	90	0,717	397,58	357,82	10734,60
	120	0,717	397,58	357,82	10734,60
	180	0,713	395,34	355,81	21408,90
	240	0,724	401,49	361,34	21514,50
	300	0,737	408,77	367,89	21876,90
	360	0,715	394,46	356,81	21741
					$\Sigma = 124308,9$
III	30	0,713	395,34	355,81	5337,15
	60	0,727	403,17	362,85	10779,90
	90	0,736	408,21	367,39	10953,60
	120	0,721	399,81	359,83	10908,30
	180	0,740	410,45	369,41	21877,20
	240	0,726	402,61	362,35	21952,80
	300	0,717	397,58	357,82	21605,10
	360	0,717	397,58	357,82	21469,20
					$\Sigma = 124883,25$

Keterangan : Wt = obat terlarut

AUC = Area Under Curve

LAMPIRAN G
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN
FORMULA 2

Replikasi	t (menit)	Absorbansi	Csampel ($\mu\text{g/ml}$)	Wt (mg)	AUC (mg.menit)
I	30	0,135	71,84	64,66	96,99
	60	0,262	142,92	128,63	2899,35
	90	0,314	172,02	154,82	4251,75
	120	0,345	189,37	170,43	4878,75
	180	0,405	222,95	200,66	11132,70
	240	0,432	238,06	214,25	12447,30
	300	0,469	258,77	232,89	13414,20
	360	0,477	263,25	236,93	14094,60
					$\Sigma = 63215,64$
II	30	0,218	118,29	106,46	1596,90
	60	0,240	130,60	117,54	3360,00
	90	0,295	161,39	145,25	3941,85
	120	0,327	179,30	161,37	4599,30
	180	0,351	192,73	173,46	10044,90
	240	0,379	208,40	187,56	10830,60
	300	0,392	215,68	194,112	11450,16
	360	0,409	225,19	202,671	11903,49
					$\Sigma = 57727,20$
III	30	0,158	84,71	76,24	1143,60
	60	0,216	117,17	105,45	2725,35
	90	0,230	125,01	112,51	3269,40
	120	0,265	144,60	130,14	3639,75
	180	0,272	148,51	133,66	7914,00
	240	0,301	164,74	148,27	8457,90
	300	0,322	176,50	158,85	9213,60
	360	0,355	194,97	175,47	10029,60
					$\Sigma = 46393,20$

LAMPIRAN H
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN
FORMULA 3

Replikasi	t (menit)	Absorbansi	Csampel ($\mu\text{g/ml}$)	Wt (mg)	AUC (mg.menit)
I	30	0,059	29,30	26,37	395,55
	60	0,072	36,57	32,91	889,20
	90	0,081	41,61	37,45	1055,40
	120	0,090	46,65	41,99	1191,60
	180	0,097	50,57	45,51	2625,00
	240	0,107	56,16	50,54	2881,50
	300	0,123	65,12	58,61	3274,50
	360	0,155	83,03	74,73	4000,20
					$\Sigma = 16312,95$
II	30	0,072	36,57	32,91	493,65
	60	0,076	38,81	34,93	1017,60
	90	0,086	44,41	39,97	1123,50
	120	0,094	48,89	44,00	1258,65
	180	0,097	50,57	45,51	2685,30
	240	0,108	56,72	51,05	2896,80
	300	0,125	66,24	59,62	3320,10
	360	0,139	74,07	66,66	3788,40
					$\Sigma = 16584,00$
III	30	0,086	44,41	39,97	599,55
	60	0,103	53,93	48,54	1327,65
	90	0,104	54,48	49,03	1463,55
	120	0,106	55,60	50,04	1486,05
	180	0,135	71,84	64,66	3441,00
	240	0,146	77,99	70,19	4045,50
	300	0,149	79,67	71,70	4256,70
	360	0,165	88,63	79,77	4544,10
					$\Sigma = 21164,10$

LAMPIRAN I
HASIL UJI DISOLUSI TABLET LEPAS LAMBAT IBUPROFEN
FORMULA 4

Replikasi	t (menit)	Absorbansi	Csampel ($\mu\text{g/ml}$)	Wt (mg)	AUC (mg.menit)
I	30	0,029	12,51	11,26	168,90
	60	0,045	21,46	19,31	458,55
	90	0,048	23,14	20,83	602,10
	120	0,060	29,86	26,87	715,50
	180	0,077	39,37	35,43	1869,00
	240	0,088	45,53	40,98	2292,30
	300	0,097	50,57	45,51	2594,70
	360	0,105	55,04	49,54	2851,50
					$\Sigma = 11552,55$
II	30	0,048	23,14	20,83	312,45
	60	0,050	24,26	21,83	639,90
	90	0,063	31,54	28,39	753,30
	120	0,075	38,25	34,43	942,30
	180	0,080	41,05	36,95	2141,40
	240	0,096	50,01	45,01	2458,80
	300	0,106	55,60	50,04	2851,50
	360	0,128	67,92	61,13	3335,10
					$\Sigma = 13434,75$
III	30	0,057	28,18	25,36	380,40
	60	0,059	29,30	26,37	775,95
	90	0,060	29,86	26,87	798,60
	120	0,064	32,10	28,89	836,40
	180	0,081	41,61	37,45	1990,20
	240	0,090	46,65	41,99	2383,20
	300	0,098	51,13	46,02	2640,30
	360	0,120	63,44	57,10	3093,60
					$\Sigma = 12898,65$

LAMPIRAN J
UJI F KURVA BAKU

Replikasi 1

Konsentrasi	Absorbansi	x²	y²	xy
5,265	0,013	27,72023	0,000169	0,068445
10,53	0,042	110,8809	0,001764	0,44226
21,06	0,055	443,5236	0,003025	1,1583
31,59	0,076	997,9281	0,005776	2,40084
42,12	0,098	1774,094	0,009604	4,12776
52,45	0,083	2751,003	0,006889	4,35335
104,9	0,172	11004,01	0,029584	18,0428
209,8	0,377	44016,04	0,142129	79,0946
314,7	0,540	99036,09	0,2916	169,938
419,6	0,747	176064,2	0,558009	313,4412
524,5	0,968	275100,3	0,937024	507,716
629,4	1,136	396144,4	1,290496	714,9984

Replikasi 2

Konsentrasi	Absorbansi	x²	y²	xy
5,3	0,017	28,09	0,000289	0,0901
10,6	0,077	112,36	0,005929	0,8162
21,2	0,111	449,44	0,012321	2,3532
31,8	0,128	1011,24	0,016384	4,0704
42,4	0,140	1797,76	0,0196	5,936
53,2	0,172	2830,24	0,029584	9,1504
106,4	0,282	11320,96	0,079524	30,0048
212,8	0,431	45283,84	0,185761	91,7168
319,2	0,627	101888,6	0,393129	200,1384
425,6	0,825	181135,4	0,680625	351,12
532,0	1,033	283024,0	1,067089	549,556
638,4	1,225	407554,6	1,500625	782,04

Replikasi 3

Konsentrasi	Absorbansi	x^2	y^2	xy
5,255	0,027	27,61503	0,000729	0,141885
10,51	0,075	110,4601	0,005625	0,78825
21,02	0,095	441,8404	0,009025	1,9969
31,53	0,128	994,1409	0,016384	4,03584
42,04	0,140	1767,362	0,0196	5,8856
51,5	0,082	2652,25	0,006724	4,223
103,0	0,179	10609	0,032041	18,437
206,0	0,352	42436	0,123904	72,512
309,0	0,497	95481	0,247009	153,573
412,0	0,671	169744	0,450241	276,452
515,0	0,871	265225	0,758641	448,565
618,0	1,101	381924	1,212201	680,418

	ΣX^2	ΣXY	ΣY^2	N	Ssi	RDF
Replikasi 1	1007470	1815,782	3,276069	12	3,274267	11
Replikasi 2	1036436	2026,992	3,99086	12	3,988904	11
Replikasi 3	971412,7	1667,028	2,882124	12	2,880408	11
	3015319	5509,803	10,14905		10,14358	

$$SSC = 10,14723$$

$$F = 0,005932 < F \text{ tabel}_{0,05 (2,35)} = 3,27$$

Karena F hitung $<$ F tabel maka tidak ada perbedaan bermakna antar persamaan regresi

LAMPIRAN K
HASIL UJI STATISTIK KEKERASAN TABLET LEPAS LAMBAT
IBUPROFEN

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	53,09	17,70	0,19
Column 2	3	53,89	17,96	0,00
Column 3	3	52,63	17,54	0,14
Column 4	3	52,6	17,53	0,03

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	0,36	3	0,12	1,36	0,32	4,07
Within Groups	0,71	8	0,09			
Total	1,07	11				

Karena $F_{hitung} = 1,36 < F_{tabel_{0,05(3,11)}} = 3,59$; maka H_0 diterima dan tidak ada perbedaan bermakna antar formula

LAMPIRAN L
HASIL UJI STATISTIK KERAPUHAN TABLET LEPAS LAMBAT
IBUPROFEN

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	0,50	0,16	1,26E-05
Column 2	3	0,49	0,16	2,49E-05
Column 3	3	0,49	0,16	1,7E-07
Column 4	3	0,49	0,16	5,45E-06

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	3,32E-05	3	1,11E-05	1,03	0,43	4,07
Within Groups	8,62E-05	8	1,08E-05			
Total	0,000119	11				

Karena $F_{hitung} = 1,03 < F_{tabel_{0,05(3,11)}} = 3,59$; maka H_0 diterima dan tidak ada perbedaan bermakna antar formula

LAMPIRAN M
HASIL UJI STATISTIK PENETAPAN KADAR TABLET LEPAS
LAMBAT IBUPROFEN

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	299,86	99,95	0,03
Column 2	3	300,83	100,28	0,70
Column 3	3	301,38	100,46	0,18
Column 4	3	302,93	100,98	0,98

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	1,65	3	0,55	1,17	0,38	4,07
Within Groups	3,77	8	0,47			
Total	5,42	11				

Karena $F_{hitung} = 1,17 < F_{tabel_{0,05(3,11)}} = 3,59$; maka H_0 diterima dan tidak ada perbedaan bermakna antar formula

LAMPIRAN N
HASIL UJI STATISTIK %DE₃₆₀

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	259,97	86,66	0,06
Column 2	3	115,89	38,63	35,30
Column 3	3	37,37	12,46	3,55
Column 4	3	26,05	8,68	0,45

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	11616,09	3	3872,03	393,51	5,04E-09	4,07
Within Groups	78,72	8	9,84			
Total	11694,81	11				

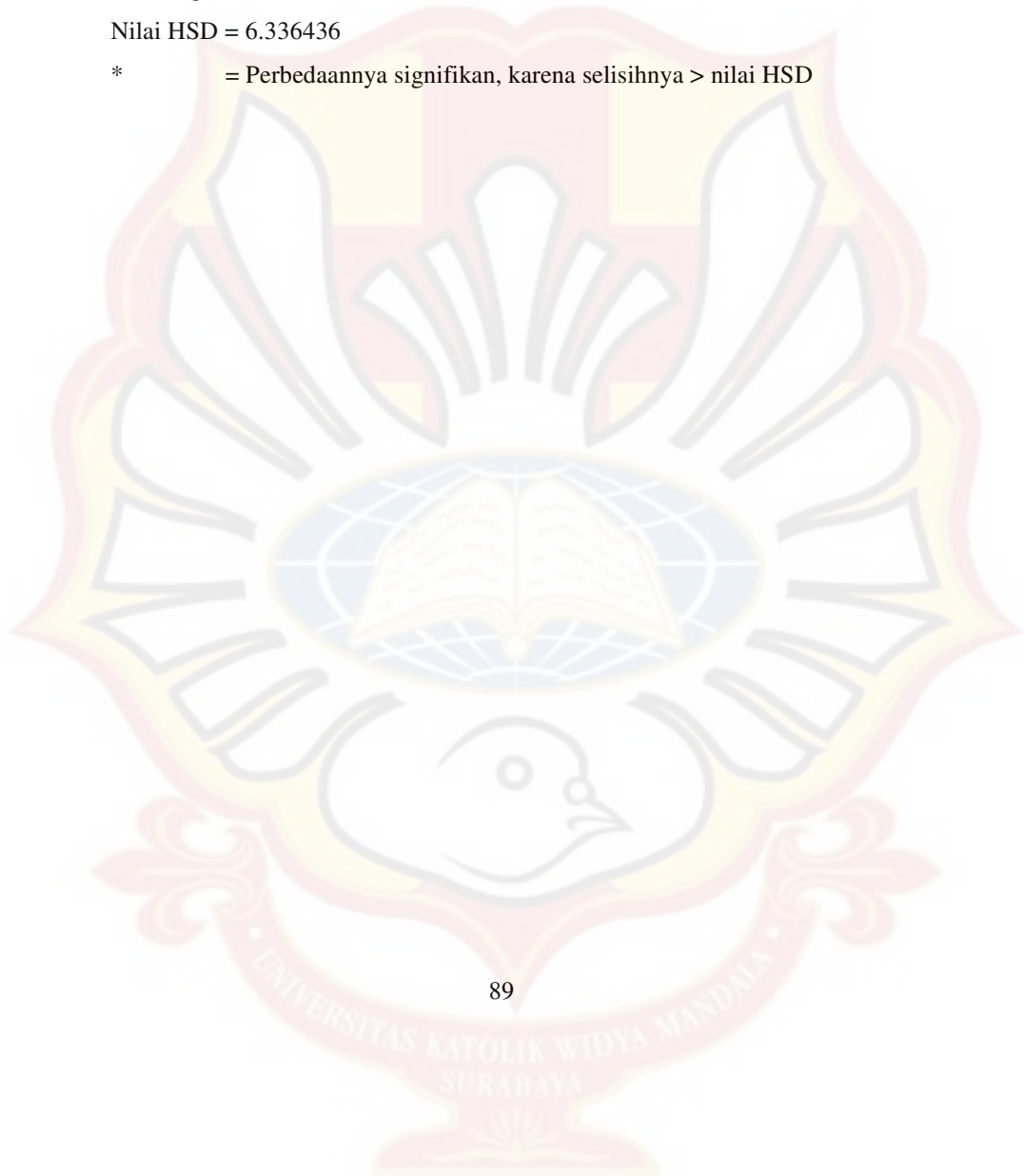
Karena $F_{hitung} = 393,51 > F_{tabel\ 0,05\ (3,11)} = 3,59$; maka H_0 ditolak dan ada perbedaan bermakna antar formula

	FA	FB	FC	FD
Mean	86,67	38,63	12,46	8,68
FA	86,67	0	-48,03 *	-77,97 *
FB	38,63	0	-26,17 *	-29,95 *
FC	12,46		0	-3,77
FD	8,68			0

Keterangan:

Nilai HSD = 6.336436

* = Perbedaannya signifikan, karena selisihnya > nilai HSD



LAMPIRAN O
SERTIFIKAT ANALISIS IBUPROFEN



Shasun Chemicals And Drugs Ltd.

IBUPROFEN BP/Ph.Eur. (SN Grade) CERTIFICATE OF ANALYSIS			
Nature of Packing : Sea Worthy Fibre Drum Sample Taken By : S.Sivakumar Date of Manufacture : July 2006 Expiry Date : June 2011 Batch Volume(Qty) : 3000 Kg.		Analytical Report No. : FPB0607674 Batch Number : IBU0607674 Date of Analysis : 25-07-2006 Date of Report : 25-07-2006 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	Conforms	The IR spectrum of sample should be concordant with the spectrum of Ibuprofen RS
	a) By IR		
	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-Isobutyl 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 (Apart from impurity B)	0.04 % (Area %) 0.14 % (Area %)	NMT 0.10 % (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, Periyakalpet, 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



Shasun Chemicals And Drugs Ltd.

IBUPROFEN BP/Ph.Eur. (SN Grade) CERTIFICATE OF ANALYSIS			
S.No	TESTS	RESULTS	LIMITS
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.	
ADDITIONAL TESTS			
a.	Bulk Density Untapped Tapped(1250 tappings)	0.45 g/mL 0.64 g/mL	0.35- 0.55 g/mL 0.50- 0.75 g/mL
b.	Mean Particle Size	76.4 microns	60.0 - 130.0 microns
c.	Residual solvents i) Acetone ii) Isopropyl alcohol iii) Hexanes iv) Tri chloro ethylene v) Methanol φ	17 PPM LT 0.89 PPM 29 PPM LT 0.19 PPM Not Detected	NMT 100 PPM NMT 250 PPM NMT 290 PPM NMT 80 PPM NMT 500 PPM
OPINION: The Material Complies As Per BP/Ph.Eur. Standard. Note :NMT = Not more than NLT = Not less than LT = Less than φ NOT USED IN THE PROCESS, TEST INCLUDED FOR COMPLIANCE WITH CERTIFICATE OF SUITABILITY.			
Compiled by : <i>Clr</i> Date : 25/07/2006 (E.Senthikumar) Senior Chemist		Reviewed by : <i>pr</i> Date : 25/07/2006 (S.Rajasudalainuthu) Senior Chemist	Approved by : <i>[Signature]</i> Date : 25/07/2006 (N.Vinayagaperumal) Dy.QC-Incharge
SCQC/F-024/F/06			

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Shasun Road, Periyakalpet, 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 P

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 Q
TABEL UJI HSD

$k \backslash d.k.$	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	4.01	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: Scheffler (1987).

LAMPIRAN R
TABEL UJI F

TABEL DISTRIBUSI F UNTUK 5% DAN 1%

Baris atas untuk taraf signifikan 5%
Baris bawah untuk taraf signifikan 1%

$V_2 = dk$ penyebut	$V_1 = dk$ pembilang																									
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞		
1	161 4052	200 4999	216 5403	225 5625	230 5764	234 5859	237 5928	239 5951	241 6022	242 6056	243 6082	244 6106	245 6142	246 6169	248 6208	249 6234	250 6258	251 6286	252 6302	253 6323	253 6334	254 6352	254 6361	254 6366		
2	18,51 98,49	19,00 99,01	19,16 99,17	19,25 99,25	19,30 99,30	19,33 99,33	19,36 99,34	19,37 99,36	19,38 97,38	19,39 99,40	19,40 99,41	19,41 99,42	19,42 99,43	19,43 99,44	19,44 99,45	19,45 99,46	19,46 99,47	19,47 99,48	19,47 99,48	19,48 99,49	19,49 99,49	19,49 99,49	19,50 99,50	19,50 99,50		
3	10,13 34,12	9,55 30,81	9,28 29,46	9,12 28,71	9,01 28,24	8,94 27,91	8,88 27,67	8,84 27,49	8,81 27,34	8,78 27,23	8,76 27,13	8,74 27,05	8,71 26,92	8,69 26,83	8,66 26,69	8,64 26,60	8,62 26,50	8,60 26,41	8,58 26,30	8,57 26,27	8,56 26,23	8,54 26,18	8,54 26,14	8,53 26,12		
4	7,71 21,20	6,94 18,00	6,59 16,69	6,39 15,98	6,26 15,52	6,16 15,21	6,09 14,98	6,04 14,80	6,00 14,66	5,96 14,54	5,93 14,45	5,91 14,37	5,87 14,24	5,84 14,15	5,80 14,02	5,77 13,93	5,74 13,83	5,71 13,74	5,70 13,69	5,68 13,61	5,66 13,57	5,65 13,52	5,64 13,48	5,53 13,46		
5	6,61 16,26	5,79 13,27	5,41 12,06	5,19 11,39	5,05 10,97	4,95 10,67	4,88 10,45	4,82 10,27	4,78 10,15	4,74 10,05	4,70 9,96	4,68 9,89	4,64 9,77	4,60 9,68	4,56 9,55	4,53 9,47	4,50 9,38	4,46 9,29	4,44 9,24	4,42 9,17	4,40 9,13	4,38 9,07	4,37 9,04	4,36 9,02		
6	5,99 13,74	5,14 10,92	4,76 9,78	4,53 9,15	4,39 8,75	4,28 8,47	4,21 8,26	4,15 8,10	4,10 7,98	4,06 7,87	4,03 7,79	4,00 7,72	3,96 7,60	3,92 7,52	3,87 7,39	3,84 7,31	3,81 7,23	3,77 7,14	3,75 7,09	3,72 7,02	3,71 6,99	3,69 6,94	3,68 6,90	3,67 6,88		
7	5,59 12,25	4,74 9,55	4,35 8,45	4,12 7,85	3,97 7,46	3,87 7,19	3,79 7,00	3,73 6,84	3,68 6,71	3,63 6,62	3,60 6,54	3,57 6,47	3,52 6,35	3,49 6,27	3,44 6,15	3,41 6,07	3,38 5,98	3,34 5,90	3,32 5,85	3,29 5,78	3,28 5,75	3,25 5,70	3,24 5,67	3,23 5,65		
8	5,32 11,26	4,46 8,65	4,07 7,59	3,84 7,01	3,69 6,63	3,58 6,37	3,50 6,19	3,44 6,03	3,39 5,91	3,34 5,82	3,31 5,74	3,28 5,67	3,23 5,56	3,20 5,48	3,15 5,36	3,12 5,28	3,08 5,20	3,05 5,11	3,03 5,06	3,00 5,00	2,98 4,96	2,96 4,91	2,94 4,88	2,93 4,86		
9	5,12 10,56	4,26 8,02	3,86 6,99	3,63 6,42	3,48 6,06	3,37 5,80	3,29 5,62	3,23 5,47	3,18 5,35	3,13 5,26	3,10 5,18	3,07 5,11	3,02 5,00	2,98 4,92	2,93 4,80	2,90 4,73	2,86 4,61	2,82 4,56	2,80 4,51	2,77 4,45	2,76 4,41	2,73 4,36	2,72 4,33	2,71 4,34		

$V_2 = dk$ penyebut	$V_1 = dk$ pembilang																								Z
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500		
10	4,96	4,10	3,71	3,48	3,33	3,22	3,14	3,07	3,02	2,97	2,94	2,91	2,86	2,82	2,77	2,74	2,70	2,67	2,64	2,61	2,59	2,56	2,55	2,54	
11	10,04	7,56	6,55	5,99	5,64	5,39	5,21	5,06	4,95	4,85	4,78	4,71	4,60	4,52	4,41	4,33	4,25	4,17	4,12	4,05	4,01	3,96	3,93	3,91	
12	4,84	3,98	3,59	3,36	3,20	3,09	3,01	2,95	2,90	2,86	2,82	2,79	2,74	2,70	2,65	2,61	2,57	2,53	2,50	2,47	2,45	2,42	2,41	2,40	
13	9,65	7,20	6,22	5,67	5,32	5,07	4,88	4,74	4,63	4,54	4,46	4,40	4,29	4,21	4,10	4,02	3,94	3,86	3,80	3,74	3,70	3,66	3,62	3,60	
14	4,75	3,88	3,49	3,26	3,11	3,00	2,92	2,85	2,80	2,76	2,72	2,69	2,64	2,60	2,54	2,50	2,46	2,42	2,40	2,36	2,35	2,32	2,31	2,30	
15	9,07	6,70	5,74	5,20	4,86	4,62	4,44	4,30	4,19	4,10	4,02	3,96	3,85	3,78	3,67	3,59	3,51	3,42	3,37	3,30	3,27	3,21	3,18	3,16	
16	4,60	3,74	3,34	3,11	2,96	2,85	2,77	2,70	2,65	2,60	2,56	2,53	2,48	2,44	2,39	2,35	2,31	2,27	2,24	2,21	2,19	2,16	2,14	2,13	
17	8,86	6,51	5,56	5,03	4,69	4,46	4,28	4,14	4,03	3,94	3,86	3,80	3,70	3,62	3,51	3,43	3,34	3,26	3,21	3,14	3,11	3,06	3,02	3,00	
18	4,54	3,68	3,29	3,06	2,90	2,79	2,70	2,64	2,59	2,55	2,51	2,48	2,43	2,39	2,33	2,29	2,25	2,21	2,18	2,15	2,12	2,10	2,08	2,07	
19	8,68	6,36	5,42	4,89	4,56	4,32	4,14	4,00	3,89	3,80	3,73	3,67	3,56	3,48	3,36	3,29	3,20	3,12	3,07	3,00	2,97	2,92	2,89	2,87	
20	4,49	3,63	3,24	3,01	2,85	2,74	2,66	2,59	2,54	2,49	2,45	2,42	2,37	2,33	2,28	2,24	2,20	2,16	2,13	2,09	2,07	2,04	2,02	2,01	
21	8,52	6,23	5,29	4,77	4,44	4,20	4,03	3,89	3,78	3,69	3,61	3,55	3,45	3,37	3,25	3,18	3,10	3,01	2,96	2,89	2,86	2,80	2,77	2,75	
22	4,45	3,59	3,20	2,96	2,81	2,70	2,67	2,55	2,50	2,45	2,41	2,38	2,33	2,29	2,23	2,19	2,15	2,11	2,08	2,04	2,02	1,99	1,97	1,96	
23	8,42	6,11	5,18	4,67	4,34	4,10	3,93	3,79	3,68	3,59	3,52	3,45	3,35	3,27	3,16	3,08	3,00	2,92	2,86	2,79	2,76	2,70	2,67	2,65	
24	4,41	3,55	3,16	2,93	2,77	2,66	2,58	2,51	2,46	2,41	2,37	2,34	2,29	2,25	2,19	2,15	2,11	2,07	2,04	2,00	1,98	1,95	1,93	1,92	
25	8,28	6,05	5,09	4,58	4,25	4,01	3,85	3,71	3,60	3,51	3,44	3,37	3,27	3,19	3,07	3,00	2,91	2,83	2,78	2,71	2,68	2,62	2,59	2,57	
26	4,38	3,52	3,13	2,90	2,74	2,63	2,55	2,48	2,43	2,38	2,34	2,31	2,26	2,21	2,15	2,11	2,07	2,02	2,00	1,96	1,94	1,91	1,90	1,88	
27	8,18	5,93	5,01	4,50	4,17	3,94	3,77	3,63	3,52	3,43	3,36	3,30	3,19	3,12	3,00	2,92	2,84	2,76	2,70	2,63	2,60	2,54	2,51	2,49	
28	4,35	3,49	3,10	2,87	2,71	2,60	2,52	2,45	2,40	2,35	2,31	2,26	2,23	2,18	2,12	2,08	2,04	1,99	1,96	1,92	1,90	1,87	1,85	1,84	
29	8,02	5,78	4,87	4,37	4,04	3,81	3,65	3,51	3,40	3,31	3,24	3,17	3,07	2,99	2,88	2,80	2,72	2,63	2,58	2,51	2,47	2,42	2,38	2,36	
30	4,30	3,44	3,05	2,82	2,66	2,55	2,47	2,40	2,35	2,30	2,26	2,23	2,18	2,13	2,07	2,03	1,98	1,93	1,91	1,87	1,84	1,81	1,80	1,78	
31	7,94	5,72	4,82	4,31	3,99	3,76	3,59	3,45	3,35	3,26	3,18	3,12	3,02	2,94	2,83	2,75	2,67	2,58	2,53	2,46	2,42	2,37	2,33	2,31	
32	4,28	3,42	3,03	2,80	2,64	2,53	2,45	2,38	2,32	2,28	2,24	2,20	2,14	2,10	2,04	2,00	1,96	1,91	1,88	1,84	1,82	1,79	1,77	1,76	
33	7,88	5,66	4,76	4,26	3,94	3,71	3,54	3,41	3,30	3,21	3,14	3,07	2,97	2,89	2,78	2,70	2,62	2,53	2,48	2,41	2,37	2,32	2,28	2,26	

$V_2 = dk$ penyebut	$V_1 = dk$ pembilang																											
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞				
24	4,26	3,40	3,01	2,78	2,62	2,51	2,43	2,36	2,30	2,26	2,22	2,18	2,13	2,09	2,02	1,98	1,94	1,89	1,86	1,82	1,80	1,76	1,74	1,73				
	7,82	5,61	4,72	4,22	3,90	3,67	3,50	3,36	3,25	3,17	3,09	3,03	2,93	2,85	2,74	2,66	2,58	2,49	2,44	2,36	2,33	2,27	2,23	2,21				
25	4,24	3,38	2,99	2,76	2,60	2,49	2,41	2,34	2,28	2,24	2,20	2,16	2,11	2,06	2,00	1,96	1,92	1,87	1,84	1,80	1,77	1,74	1,72	1,71				
	7,77	5,57	4,68	4,18	3,86	3,63	3,46	3,32	3,21	3,13	3,05	2,99	2,89	2,81	2,70	2,62	2,54	2,45	2,40	2,32	2,29	2,23	2,19	2,17				
26	4,22	3,37	2,89	2,74	2,59	2,47	2,39	2,32	2,27	2,22	2,18	2,15	2,10	2,05	1,99	1,95	1,90	1,85	1,82	1,78	1,76	1,72	1,70	1,69				
	7,72	5,53	4,64	4,14	3,82	3,59	3,42	3,29	3,17	3,09	3,02	2,96	2,86	2,77	2,66	2,58	2,50	2,41	2,36	2,28	2,25	2,19	2,15	2,13				
27	4,21	3,35	2,96	2,73	2,57	2,46	2,37	2,30	2,25	2,20	2,16	2,13	2,08	2,03	1,97	1,93	1,88	1,84	1,80	1,76	1,74	1,71	1,68	1,67				
	7,68	5,49	4,60	4,11	3,79	3,56	3,39	3,26	3,14	3,06	2,98	2,93	2,83	2,74	2,63	2,55	2,47	2,38	2,33	2,25	2,21	2,16	2,12	2,10				
28	4,20	3,34	2,95	2,71	2,56	2,44	2,36	2,29	2,24	2,19	2,15	2,12	2,06	2,02	1,96	1,91	1,87	1,81	1,78	1,75	1,72	1,69	1,67	1,65				
	7,64	5,45	4,57	4,07	3,76	3,53	3,36	3,23	3,11	3,03	2,95	2,90	2,80	2,71	2,60	2,52	2,44	2,35	2,30	2,22	2,18	2,13	2,09	2,06				
29	4,18	3,33	2,93	2,70	2,54	2,43	2,35	2,28	2,22	2,18	2,14	2,10	2,05	2,00	1,94	1,90	1,85	1,80	1,77	1,73	1,71	1,68	1,65	1,64				
	7,60	5,52	4,54	4,04	3,73	3,50	3,33	3,20	3,08	3,00	2,92	2,87	2,77	2,68	2,57	2,49	2,41	2,32	2,27	2,19	2,15	2,10	2,06	2,03				
30	4,17	3,32	2,92	2,69	2,53	2,42	2,34	2,27	2,21	2,16	2,12	2,09	2,04	1,99	1,93	1,89	1,84	1,79	1,76	1,72	1,69	1,66	1,64	1,62				
	7,56	5,39	4,51	4,02	3,70	3,47	3,30	3,17	3,06	2,98	2,90	2,84	2,74	2,66	2,55	2,47	2,38	2,29	2,24	2,16	2,13	2,07	2,03	2,01				
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	2,80	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	1,99	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				

LAMPIRAN S
ANOVA PERSEN OBAT LARUT 3 JAM

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

Response 1 Persen obat larut 3 jam

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	12661.08	3	4220.359	207.3621	< 0.0001
A-AKont. Matriks	9161.555	1	9161.555	450.1416	< 0.0001
B-Konst. PVP	2025.661	1	2025.661	99.52831	< 0.0001
AB	1473.862	1	1473.862	72.41635	< 0.0001
Pure Error	162.8209	8	20.35261		
Cor Total	12823.9	11			

significant

The Model F-value of 207.36 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.	4.511387	R-Squared	0.987303
Mean	38.6375	Adj R-Squared	0.982542
C.V. %	11.67619	Pred R-Squared	0.971432
PRESS	366.347	Adeq Precision	31.19293

The "Pred R-Squared" of 0.9714 is in reasonable agreement with the "Adj R-Squared" of 0.9825.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 31.193 indicates an adequate signal. This model can be used to navigate the design space.

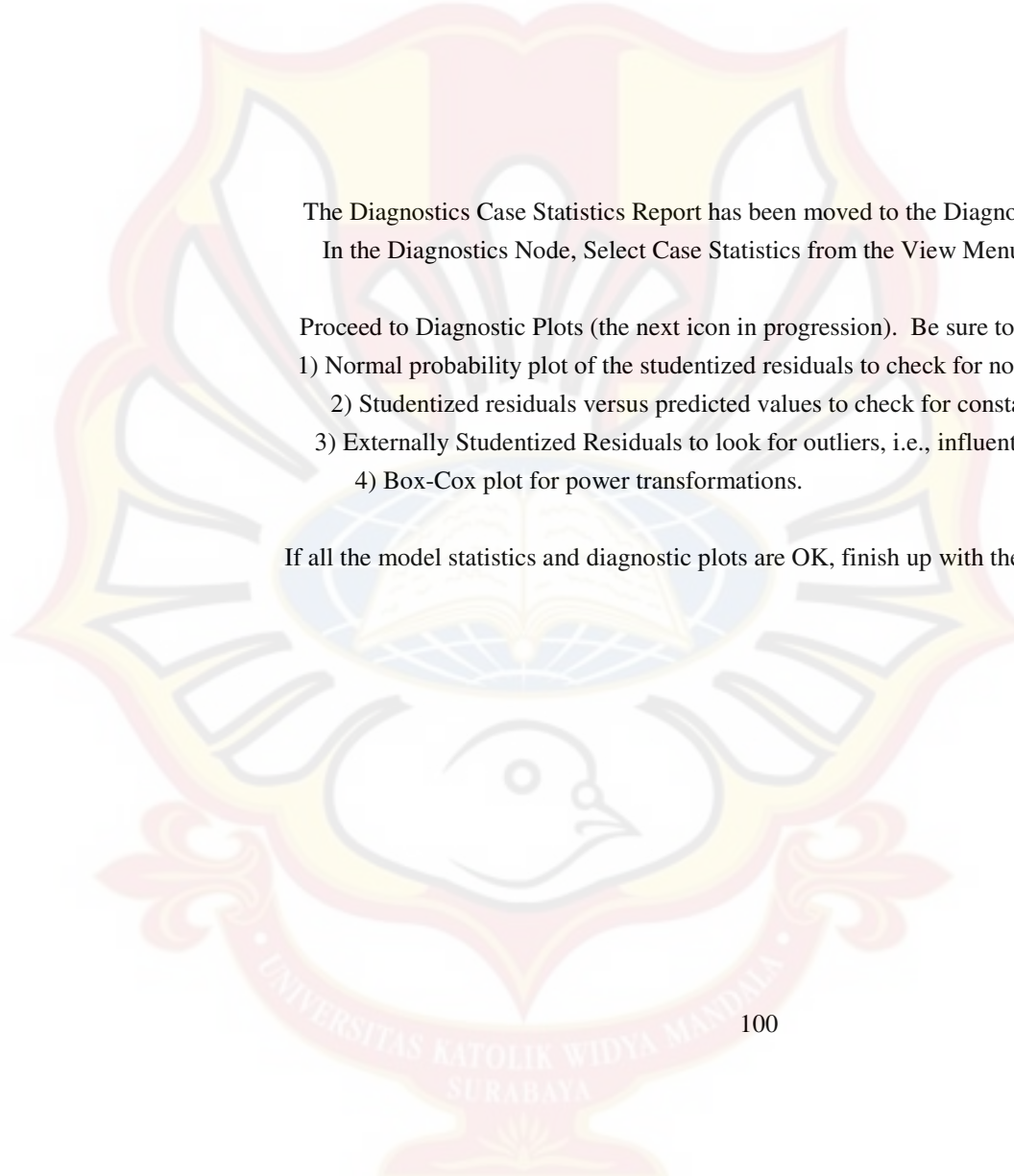
Factor	Coefficient		Standard Error	95% CI		VIF
	Estimate	df		Low	High	
Intercept	38.6375	1	1.302325	35.63433	41.64067	
A-AKont. Matriks	-27.6308	1	1.302325	-30.634	-24.6277	1
B-Konst. PVP	-12.9925	1	1.302325	-15.9957	-9.98933	1
AB	11.0825	1	1.302325	8.079333	14.08567	1

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Persen obat larut 3 jam} &= \\
 &38.6375 \\
 &-27.6308 * A \\
 &-12.9925 * B \\
 &+ 11.0825 * A * B
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Persen obat larut 3 jam} &= \\
 &38.6375 \\
 &-27.6308 * \text{AKont. Matriks} \\
 &-12.9925 * \text{Konst. PVP} \\
 &+ 11.0825 * \text{AKont. Matriks} * \text{Konst. PVP}
 \end{aligned}$$



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 T
ANOVA PERSEN OBAT LARUT 6 JAM

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

Response 2 Persen obat larut 6 jam

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	10976.31	3	3658.769	229.1577	< 0.0001	significant
A-AKont. Matriks	8769.613	1	8769.613	549.2626	< 0.0001	
B-Konst. PVP	1360.644	1	1360.644	85.2205	< 0.0001	
AB	846.0481	1	846.0481	52.99009	< 0.0001	
Pure Error	127.7293	8	15.96616			
Cor Total	11104.03	11				

The Model F-value of 229.16 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.	3.995768	R-Squared	0.988497
Mean	43.12833	Adj R-Squared	0.984183
C.V. %	9.264832	Pred R-Squared	0.974118
PRESS	287.3909	Adeq Precision	32.66785

The "Pred R-Squared" of 0.9741 is in reasonable agreement with the "Adj R-Squared" of 0.9842.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 32.668 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	43.12833	1	1.153479	40.46841	45.78826	
A-AKont. Matriks	-27.0333	1	1.153479	-29.6933	-24.3734	1
B-Konst. PVP	-10.6483	1	1.153479	-13.3083	-7.98841	1
AB	8.396667	1	1.153479	5.73674	11.05659	1

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Persen obat larut 6} \\
 \text{jam} &= \\
 &43.12833 \\
 &-27.0333 * A \\
 &-10.6483 * B \\
 &* A \\
 &8.396667 * B
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned} \text{Persen obat larut 6} \\ \text{jam} &= \\ &43.12833 \\ &-27.0333 \quad * \text{AKont. Matriks} \\ &-10.6483 \quad * \text{Konst. PVP} \\ &8.396667 \quad * \text{AKont. Matriks} * \text{Konst. PVP} \end{aligned}$$

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.