BAB V
KESIMPULAN DAN SARAN

5.1 Kesimpulan

Matriks *xanthan gum* pada pembuatan tablet lepas lambat metformin HCl dengan meningkatknya konsentrasi dapat meningkatkan kekerasan tablet, menurunkan kerapuhan tablet dan meningkatkan pelepasan obat.

Matriks *locust bean gum* pada pembuatan tablet lepas lambat metformin HCl dengan meningkatnya konsentrasi dapat meningkatkan kekerasan tablet, menurunkan kerapuhan tablet dan menurunkan pelepasan obat.

Interaksi antara matriks *xanthan gum* dan *locust bean gum* dapat meningkatkan kekerasan tablet, menurunkan kerapuhan tablet dan menurunkan pelepasan obat.

Konsentrasi optimum *xanthan gum* dan *locust bean gum* yang diperoleh menggunakan pendekatan teoritis maupun statistik (program *design expert*) berturut-turut sebesar 3,75% dan 3,75% (FIV) dengan respon kekerasan tablet 17,8 kgf, kerapuhan tablet 0,18%, pelepasan obat menit ke-360 71,48%.

5.2 Saran

Untuk penelitian selanjutnya dapat digunakan kombinasi matriks *xanthan gum* dan *locust bean gum* dengan konsentrasi 3,75% dan 3,75% dalam pembuatan tablet lepas lambat dengan menggunakan bahan aktif lain yang tergolong dalam *Biopharmaceutical Classification System* (BCS) sama dengan metformin HCl.

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LAMPIRAN A

HASIL UJI MUTU FISIK GRANUL

Mutu Fisik	Rep	Formula Tablet Metformin				Persyaratan
		FI	FII	FIII	FIV	
Waktu alir (detik)	1	9,52	8,55	8,39	9,39	≤ 10 detik (Siregar dan Wikarsa, 2010)
	2	9,58	8,41	8,58	9,61	
	3	9,82	8,37	8,53	9,17	
$\bar{X}$ ± SD		9,64±0,16	8,44±0,09	8,50±0,09	9,39±0,22	
Sudut diam (derajat)	1	27,47	28,10	28,37	27,47	25-40° (US Pharmacopoeial Convention, 2007)
	2	27,20	27,92	28,66	27,45	
	3	28,21	28,36	28,66	27,47	
$\bar{X}$ ± SD		27,63±0,52	28,13±0,22	28,56±0,17	27,46±0,01	
Hausner ratio (persen)	1	1,25	1,22	1,23	1,22	1,00-1,34 (US Pharmacopoeial Convention, 2007)
	2	1,26	1,22	1,22	1,21	
	3	1,25	1,22	1,22	1,19	
$\bar{X}$ ± SD		1,25±0,005	1,22±0,000	1,22±0,006	1,21±0,015	
Kompresibilitas (persen)	1	20,12	17,86	18,52	17,89	5-20% (US Pharmacopoeial Convention, 2007)
	2	20,51	17,97	18,30	17,23	
	3	20,24	18,06	18,23	15,77	
$\bar{X}$ ± SD		20,29±0,19	17,96±0,10	18,35±0,15	16,96±1,08	

LAMPIRAN B

HASIL UJI KESERAGAMAN BOBOT TABLET LEPAS LAMBAT METFORMIN HCl

Batch 1 Replikasi 1

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	691,1	1,27	697,8	0,31	694,5	0,79	697,8	0,31
2	699,3	0,10	697,9	0,30	695,7	0,61	703,4	0,49
3	698,3	0,24	696,6	0,49	699,4	0,09	693,4	0,94
4	697,3	0,39	695,0	0,71	699,8	0,03	697,5	0,36
5	692,3	1,10	702,4	0,34	703,5	0,50	697,2	0,40
6	698,3	0,24	704,6	0,66	695,5	0,64	699,5	0,07
7	693,5	0,93	697,4	0,37	698,3	0,24	699,0	0,14
8	694,0	0,86	698,6	0,20	691,9	1,16	699,4	0,09
9	700,2	0,03	699,3	0,10	694,5	0,79	692,6	1,06
10	704,4	0,63	700,4	0,06	698,2	0,26	699,1	0,13
11	701,2	0,17	701,5	0,21	693,4	0,94	700,4	0,06
12	699,7	0,04	694,5	0,79	696,4	0,51	697,3	0,39
13	699,5	0,07	701,3	0,19	691,8	1,17	701,3	0,19
14	697,3	0,39	697,8	0,31	701,5	0,21	703,4	0,49
15	694,0	0,86	700,6	0,09	702,9	0,41	704,6	0,66
16	699,2	0,11	703,4	0,49	700,0	0,00	700,2	0,03
17	702,3	0,33	700,5	0,07	697,8	0,31	697,8	0,31
18	703,1	0,44	694,7	0,76	701,6	0,23	694,6	0,77
19	700,9	0,13	695,7	0,61	705,9	0,84	695,7	0,61
20	695,7	0,61	699,8	0,03	703,9	0,56	698,7	0,19
$\bar{X}$	698,08		698,99		698,32		698,64	
SD	3,67		2,89		4,09		3,16	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 1 Replikasi 2

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	698,8	0,17	701,3	0,19	700,5	0,07	699,7	0,04
2	700,9	0,13	698,8	0,17	697,8	0,31	694,6	0,77
3	698,4	0,23	691,4	1,23	700,4	0,06	697,9	0,30
4	697,8	0,31	690,0	1,43	699,1	0,13	702,4	0,34
5	699,9	0,01	700,4	0,06	694,5	0,79	703,2	0,46
6	704,3	0,61	697,8	0,31	695,5	0,64	698,4	0,23
7	700,7	0,10	701,6	0,23	696,7	0,47	701,3	0,19
8	693,9	0,87	700,1	0,01	694,6	0,77	696,4	0,51
9	700,0	0,00	694,6	0,77	703,4	0,49	692,3	1,10
10	697,1	0,41	692,3	1,10	697,9	0,30	699,7	0,04
11	699,0	0,14	694,0	0,86	694,5	0,79	700,4	0,06
12	694,8	0,74	699,4	0,09	696,6	0,49	702,4	0,34
13	695,7	0,61	698,7	0,19	695,8	0,60	700,6	0,09
14	696,8	0,46	701,5	0,21	697,8	0,31	700,2	0,03
15	701,3	0,19	700,3	0,04	697,8	0,31	696,4	0,51
16	699,5	0,07	702,4	0,34	696,9	0,44	699,9	0,01
17	703,6	0,51	696,2	0,54	700,7	0,10	694,6	0,77
18	701,8	0,26	697,8	0,31	702,2	0,31	696,6	0,49
19	700,2	0,03	700,5	0,07	702,3	0,33	700,3	0,04
20	702,9	0,41	702,6	0,37	695,5	0,64	697,8	0,31
$\bar{X}$	699,50		698,08		698,02		698,75	
SD	2,82		3,78		2,75		2,90	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 1 Replikasi 3

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	691,4	1,23	700,8	0,11	696,4	0,51	696,6	0,49
2	697,8	0,31	697,8	0,31	697,7	0,33	699,4	0,09
3	699,4	0,09	700,6	0,09	698,3	0,24	701,3	0,19
4	699,1	0,13	698,4	0,23	704,2	0,60	694,3	0,81
5	700,2	0,03	705,7	0,81	699,4	0,09	692,4	1,09
6	703,5	0,50	700,3	0,04	697,4	0,37	695,4	0,66
7	705,1	0,73	701,3	0,19	701,3	0,19	694,9	0,73
8	697,5	0,36	699,3	0,10	693,1	0,99	699,9	0,01
9	699,4	0,09	698,4	0,23	697,4	0,37	701,3	0,19
10	698,3	0,24	697,8	0,31	699,7	0,04	704,3	0,61
11	699,8	0,03	695,8	0,60	700,6	0,09	705,2	0,74
12	703,1	0,44	695,8	0,60	702,6	0,37	700,5	0,07
13	700,9	0,13	704,9	0,70	697,5	0,36	699,2	0,11
14	701,3	0,19	695,7	0,61	700,6	0,09	699,9	0,01
15	704,7	0,67	692,3	1,10	700,9	0,13	700,1	0,01
16	696,6	0,49	691,2	1,26	701,3	0,19	693,5	0,93
17	702,8	0,40	694,6	0,77	702,2	0,31	694,5	0,79
18	695,6	0,63	696,8	0,46	700,5	0,07	700,4	0,06
19	698,4	0,23	698,4	0,23	698,8	0,17	699,7	0,04
20	706,4	0,91	703,2	0,46	700,2	0,03	701,3	0,19
$\bar{X}$	700,60		698,45		699,50		698,70	
SD	3,58		3,76		2,51		3,55	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 2 Replikasi 1

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	699,6	0,06	700,7	0,10	705,4	0,77	699,4	0,09
2	702,3	0,33	693,5	0,93	703,3	0,47	701,1	0,16
3	699,4	0,09	694,6	0,77	704,4	0,63	703,4	0,49
4	694,5	0,79	700,5	0,07	705,5	0,79	702,7	0,39
5	697,6	0,34	703,2	0,46	704,4	0,63	694,6	0,77
6	698,2	0,26	696,6	0,49	693,7	0,90	693,9	0,87
7	698,4	0,23	700,5	0,07	698,5	0,21	699,4	0,09
8	696,4	0,51	694,7	0,76	699,4	0,09	700,3	0,04
9	694,6	0,77	694,6	0,77	699,9	0,01	702,4	0,34
10	697,4	0,37	698,8	0,17	696,4	0,51	697,4	0,37
11	699,7	0,04	695,6	0,63	693,7	0,90	698,7	0,19
12	703,4	0,49	700,5	0,07	697,6	0,34	694,5	0,79
13	702,7	0,39	701,6	0,23	696,3	0,53	701,4	0,20
14	700,4	0,06	698,7	0,19	700,5	0,07	699,1	0,13
15	699,7	0,04	699,7	0,04	695,7	0,61	702,5	0,36
16	698,4	0,23	697,3	0,39	703,9	0,56	697,3	0,39
17	693,3	0,96	704,7	0,67	695,7	0,61	698,2	0,26
18	703,2	0,46	701,4	0,20	697,8	0,31	697,4	0,37
19	697,6	0,34	698,6	0,20	696,4	0,51	699,1	0,13
20	705,3	0,76	695,6	0,63	694,9	0,73	694,1	0,84
$\bar{X}$	699,10		698,57		699,17		698,84	
SD	3,17		3,15		4,01		2,96	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 2 Replikasi 2

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	704,3	0,61	704,5	0,64	697,1	0,41	701,7	0,24
2	700,4	0,06	695,6	0,63	700,9	0,13	698,3	0,24
3	703,1	0,44	693,6	0,91	694,2	0,83	700,1	0,01
4	699,4	0,09	699,7	0,04	702,8	0,40	698,2	0,26
5	694,6	0,77	697,4	0,37	700,4	0,06	699,6	0,06
6	695,7	0,61	698,3	0,24	699,3	0,10	696,4	0,51
7	698,4	0,23	699,6	0,06	695,4	0,66	701,4	0,20
8	699,3	0,10	704,3	0,61	703,1	0,44	695,1	0,70
9	699,4	0,09	700,4	0,06	697,0	0,43	700,5	0,07
10	694,6	0,77	695,8	0,60	694,9	0,73	697,4	0,37
11	697,8	0,31	704,3	0,61	699,1	0,13	693,9	0,87
12	704,7	0,67	700,4	0,06	701,9	0,27	699,1	0,13
13	700,5	0,07	695,4	0,66	703,4	0,49	698,6	0,20
14	695,5	0,64	699,5	0,07	694,6	0,77	697,7	0,33
15	697,8	0,31	705,3	0,76	697,0	0,43	701,9	0,27
16	696,8	0,46	697,5	0,36	699,4	0,09	703,6	0,51
17	697,4	0,37	704,6	0,66	694,7	0,76	698,9	0,16
18	699,4	0,09	700,4	0,06	695,2	0,69	694,6	0,77
19	700,6	0,09	698,6	0,20	700,3	0,04	696,8	0,46
20	704,6	0,66	696,6	0,49	693,2	0,97	700,2	0,03
$\bar{X}$	699,21		699,59		698,19		698,70	
SD	3,14		3,49		3,27		2,55	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 2 Replikasi 3

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	694,0	0,86	697,8	0,31	694,5	0,79	700,4	0,06
2	699,4	0,09	699,4	0,09	699,3	0,10	698,3	0,24
3	705,6	0,80	704,6	0,66	697,6	0,34	699,2	0,11
4	702,5	0,36	697,4	0,37	700,7	0,10	697,6	0,34
5	694,7	0,76	697,6	0,34	701,5	0,21	698,1	0,27
6	698,2	0,26	695,5	0,64	698,6	0,20	699,3	0,10
7	695,7	0,61	697,4	0,37	695,1	0,70	694,8	0,74
8	696,7	0,47	699,3	0,10	698,3	0,24	701,6	0,23
9	698,4	0,23	703,4	0,49	700,1	0,01	697,4	0,37
10	705,7	0,81	700,6	0,09	698,5	0,21	693,7	0,90
11	703,2	0,46	705,7	0,81	695,7	0,61	697,1	0,41
12	700,4	0,06	697,8	0,31	703,8	0,54	700,4	0,06
13	699,4	0,09	698,4	0,23	694,3	0,81	702,3	0,33
14	703,5	0,50	695,3	0,67	705,6	0,80	705,1	0,73
15	704,1	0,59	698,2	0,26	696,1	0,56	693,8	0,89
16	693,4	0,94	694,5	0,79	700,3	0,04	699,3	0,10
17	698,5	0,21	696,7	0,47	697,9	0,30	697,1	0,41
18	699,4	0,09	697,4	0,37	702,2	0,31	697,4	0,37
19	704,5	0,64	699,2	0,11	701,7	0,24	699,3	0,10
20	698,4	0,23	703,9	0,56	697,5	0,36	699,5	0,07
$\bar{X}$	699,78		699,00		698,96		698,58	
SD	3,82		3,14		3,07		2,75	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 3 Replikasi 1

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	703,4	0,49	695,6	0,63	704,5	0,64	694,4	0,80
2	699,4	0,09	698,3	0,24	695,7	0,61	697,2	0,40
3	697,2	0,40	701,8	0,26	698,3	0,24	698,7	0,19
4	700,4	0,06	696,6	0,49	699,5	0,07	700,6	0,09
5	702,1	0,30	703,7	0,53	698,3	0,24	701,1	0,16
6	697,4	0,37	699,2	0,11	703,2	0,46	694,3	0,81
7	698,1	0,27	693,9	0,87	700,4	0,06	699,7	0,04
8	701,6	0,23	694,8	0,74	698,2	0,26	694,3	0,81
9	699,5	0,07	694,0	0,86	695,7	0,61	697,9	0,30
10	697,6	0,34	702,2	0,31	697,4	0,37	698,7	0,19
11	695,9	0,59	703,5	0,50	703,6	0,51	699,5	0,07
12	699,1	0,13	696,7	0,47	699,5	0,07	704,3	0,61
13	698,3	0,24	697,3	0,39	695,9	0,59	702,6	0,37
14	701,4	0,20	703,4	0,49	697,4	0,37	703,3	0,47
15	702,9	0,41	694,2	0,83	694,6	0,77	700,4	0,06
16	703,3	0,47	695,6	0,63	696	0,57	698,3	0,24
17	693,9	0,87	697,4	0,37	698,7	0,19	699,4	0,09
18	697,5	0,36	698,1	0,27	704,6	0,66	700,3	0,04
19	698,3	0,24	699,2	0,11	700,5	0,07	697,4	0,37
20	697,6	0,34	698,8	0,17	706,8	0,97	695,1	0,70
$\bar{X}$	699,24		698,21		699,44		698,87	
SD	2,57		3,24		3,46		2,89	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 3 Replikasi 2

No	Keseragaman Bobot							
	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	699,7	0,04	698,3	0,24	694,7	0,76	697,8	0,31
2	698,3	0,24	699,3	0,10	697,8	0,31	696,6	0,49
3	697,7	0,33	697,4	0,37	703,4	0,49	695,0	0,71
4	693,8	0,89	699,7	0,04	701,9	0,27	699,2	0,11
5	698,6	0,20	695,5	0,64	694,7	0,76	702,9	0,41
6	693,8	0,89	695,3	0,67	699,8	0,03	694,2	0,83
7	701,6	0,23	699,2	0,11	698,4	0,23	696,3	0,53
8	704,3	0,61	700,1	0,01	705,3	0,76	694,1	0,84
9	700,8	0,11	702,3	0,33	702,9	0,41	697,9	0,30
10	701,3	0,19	701,9	0,27	695,8	0,60	699,4	0,09
11	698,9	0,16	699,4	0,09	698,7	0,19	698,1	0,27
12	700,1	0,01	694,7	0,76	697,3	0,39	702,3	0,33
13	696,3	0,53	698,3	0,24	699,7	0,04	700,2	0,03
14	699,6	0,06	697,6	0,34	697,8	0,31	704,3	0,61
15	699,8	0,03	695,8	0,60	698,2	0,26	694,1	0,84
16	698,7	0,19	703,4	0,49	694,7	0,76	701,8	0,26
17	695,3	0,67	700,2	0,03	697,3	0,39	696,2	0,54
18	701,8	0,26	699,7	0,04	698,2	0,26	704,6	0,66
19	702,2	0,31	695,4	0,66	700,6	0,09	703,3	0,47
20	700,3	0,04	701,5	0,21	698,2	0,26	700,7	0,10
$\bar{X}$	699,14		698,75		698,77		698,95	
SD	2,74		2,52		2,92		3,46	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

Batch 3 Replikasi 3

Keseragaman Bobot								
No	FI		FII		FIII		FIV	
	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)	Bt (mg)	Pb (%)
1	700,8	0,11	700,3	0,04	702,7	0,39	698,3	0,24
2	704,5	0,64	699,6	0,06	704,1	0,59	699,4	0,09
3	703,9	0,56	695,6	0,63	697,6	0,34	697,3	0,39
4	700,1	0,01	697,3	0,39	699,1	0,13	698,3	0,24
5	702,8	0,40	699,8	0,03	693,8	0,89	699,4	0,09
6	698,9	0,16	704,6	0,66	695,8	0,60	704,3	0,61
7	697,4	0,37	700,5	0,07	699,1	0,13	703,4	0,49
8	695,3	0,67	699,7	0,04	700,3	0,04	700,4	0,06
9	698,3	0,24	698,3	0,24	696,6	0,49	701,8	0,26
10	694,9	0,73	694,6	0,77	698,2	0,26	697,6	0,34
11	698,4	0,23	698,4	0,23	700,3	0,04	700,4	0,06
12	695,7	0,61	697,3	0,39	696,1	0,56	695,7	0,61
13	696,6	0,49	699,5	0,07	700,6	0,09	698,4	0,23
14	700,4	0,06	703,4	0,49	697,2	0,40	693,5	0,93
15	698,3	0,24	705,6	0,80	695,3	0,67	703,6	0,51
16	699,2	0,11	700,3	0,04	697,8	0,31	694,6	0,77
17	702,6	0,37	693,6	0,91	698,9	0,16	696,4	0,51
18	699,7	0,04	702,6	0,37	698,3	0,24	699,5	0,07
19	701,3	0,19	696,4	0,51	703,8	0,54	700,4	0,06
20	700,8	0,11	699,9	0,01	703,5	0,50	694,2	0,83
$\bar{X}$	699,49		699,36		698,95		698,84	
SD	2,74		3,13		2,92		3,06	

*Bt = Bobot tablet; Pb = Penyimpangan bobot

LAMPIRAN C

HASIL UJI KESERAGAMAN UKURAN TABLET LEPAS LAMBAT METFORMIN HCl

Batch 1

No	Diameter tablet = 13,2 mm											
	Tebal tablet (mm)											
	F I			F II			F III			F IV		
	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3
1	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50
2	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,45	4,50
3	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50
4	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50
5	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,45	4,50	4,50
6	4,45	4,50	4,50	4,50	4,45	4,50	4,45	4,50	4,50	4,50	4,50	4,45
7	4,50	4,50	4,45	4,50	4,45	4,50	4,45	4,50	4,50	4,45	4,50	4,50
8	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50
9	4,50	4,50	4,50	4,50	4,50	4,45	4,45	4,45	4,45	4,50	4,45	4,50
10	4,50	4,45	4,50	4,50	4,50	4,45	4,45	4,45	4,45	4,50	4,50	4,50
11	4,50	4,50	4,50	4,50	4,50	4,45	4,45	4,45	4,45	4,45	4,50	4,50
12	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,45	4,50
13	4,45	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,45	4,45	4,45
14	4,45	4,50	4,45	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45
15	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,45	4,50	4,50	4,50	4,45
16	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50
17	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
18	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50
19	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50
20	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50
$\bar{X}$	4,48	4,48	4,49	4,49	4,49	4,49	4,48	4,48	4,49	4,49	4,49	4,49
SD	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,02	0,02	0,02	0,02

*R = Replikasi

Batch 2

Diameter tablet = 13,2 mm												
Tebal tablet (mm)												
No	F I			F II			F III			F IV		
	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3
1	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,45
2	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
3	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,45
4	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
5	4,45	4,50	4,50	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,50	4,45
6	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50
7	4,50	4,45	4,50	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,45	4,50
8	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50
9	4,45	4,50	4,50	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,50	4,50
10	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,45
11	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,45	4,50	4,50	4,50	4,50
12	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45
13	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,45	4,50	4,45	4,50	4,50
14	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50
15	4,45	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50
16	4,45	4,50	4,50	4,50	4,50	4,45	4,45	4,50	4,50	4,45	4,50	4,50
17	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
18	4,50	4,50	4,45	4,50	4,45	4,50	4,45	4,50	4,50	4,45	4,50	4,50
19	4,45	4,50	4,50	4,50	4,45	4,50	4,45	4,50	4,50	4,50	4,50	4,50
20	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50
$\bar{X}$	4,48	4,50	4,49	4,48	4,49	4,49	4,47	4,49	4,50	4,48	4,50	4,49
SD	0,03	0,02	0,02	0,03	0,02	0,02	0,02	0,02	0,01	0,02	0,02	0,02

*R = Replikasi

Batch 3

No	Diameter tablet = 13,2 mm											
	Tebal tablet (mm)											
	F I			F II			F III			F IV		
	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3	R 1	R 2	R 3
1	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
2	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50
3	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50
4	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,45	4,50
5	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50
6	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45
7	4,50	4,50	4,45	4,50	4,45	4,50	4,45	4,50	4,50	4,50	4,50	4,45
8	4,50	4,50	4,45	4,50	4,45	4,50	4,45	4,50	4,45	4,50	4,50	4,45
9	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,45	4,50	4,45	4,50
10	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50
11	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50
12	4,50	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50	4,50
13	4,50	4,50	4,45	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,45	4,50
14	4,50	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50
15	4,50	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,50	4,45	4,50
16	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,45	4,50	4,50	4,45
17	4,45	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50
18	4,45	4,45	4,45	4,45	4,50	4,50	4,50	4,50	4,50	4,45	4,50	4,50
19	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50	4,45	4,50	4,50
20	4,45	4,45	4,45	4,50	4,50	4,50	4,45	4,50	4,50	4,50	4,50	4,50
$\bar{X}$	4,48	4,48	4,49	4,48	4,49	4,49	4,48	4,50	4,49	4,49	4,49	4,49
SD	0,02	0,03	0,02	0,02	0,02	0,02	0,03	0,02	0,02	0,02	0,02	0,02

*R = Replikasi

LAMPIRAN D

HASIL UJI KEKERASAN TABLET LEPAS LAMBAT METFORMIN HCl

Batch 1

No	Kekerasan Tablet (kgf)											
	F I			F II			F III			F IV		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	12,3	11,6	13,8	13,2	13,1	13,8	15,5	16,8	15,5	18,4	17,7	17,2
2	11,8	13,4	12,4	13,7	13,9	13,4	16,3	16,2	15,2	18,9	17,4	18,8
3	13,0	11,2	11,6	13,5	13,3	13,6	15,9	16,2	16,6	17,8	18,0	17,9
4	13,2	11,6	11,1	14,2	13,2	13,1	15,9	15,2	15,6	17,4	17,8	18,4
5	11,3	11,8	13,2	13,5	13,9	14,2	16,8	16,4	16,9	17,3	17,6	18,6
6	11,7	11,7	13,3	13,4	13,4	13,3	15,6	15,3	15,6	17,9	17,7	17,9
7	12,6	13,9	11,6	13,6	13,9	13,6	16,8	15,7	16,1	18,1	17,9	18,0
8	11,2	11,9	13,1	13,4	13,1	13,1	16,5	16,3	15,8	18,6	17,9	17,8
9	11,6	13,6	11,4	13,5	13,1	14,4	15,6	15,3	15,9	18,3	18,0	17,3
10	12,6	11,9	12,3	13,6	13,5	13,3	16,8	15,9	15,6	17,1	18,3	18,1
$\bar{X}$	12,13	12,26	12,38	13,56	13,44	13,58	16,17	15,93	15,88	17,98	17,83	18,0
SD	0,7	1,0	0,9	0,3	0,3	0,4	0,5	0,5	0,5	0,6	0,2	0,5

*R = Replikasi

Batch 2

No	Kekerasan Tablet (kgf)											
	F I			F II			F III			F IV		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	11,2	13,8	12,8	14,2	13,4	13,9	15,7	15,4	16,4	17,6	18,1	17,8
2	13,7	11,8	12,4	13,2	13,1	13,2	15,0	15,3	16,0	18,0	18,3	17,4
3	11,5	13,3	11,8	13,0	13,9	13,9	15,6	15,5	16,3	18,7	17,2	17,0
4	11,7	12,5	12,9	13,9	13,5	13,9	15,6	16,1	16,3	17,9	17,2	18,9
5	13,6	12,2	13,6	14,5	13,3	13,8	16,3	16,3	16,6	17,6	18,6	18,4
6	11,3	12,2	13,1	13,2	13,2	13,1	16,3	16,5	16,2	17,9	18,2	17,3
7	11,3	11,9	11,6	14,6	13,1	13,7	15,1	15,9	16,6	18,2	18,2	18,1
8	11,8	12,2	12,4	13,3	13,3	13,7	15,5	16,1	16,1	17,7	18,6	17,7
9	12,3	15,8	13,5	13,4	13,0	14,0	15,5	16,4	15,1	17,5	17,4	18,9
10	13,2	13,3	11,3	14,0	13,4	13,5	16,5	15,7	15,2	17,9	17,7	18,2
$\bar{X}$	12,16	12,9	12,54	13,73	13,32	13,67	15,71	15,92	16,08	17,9	17,95	17,97
SD	1,0	1,2	0,8	0,6	0,3	0,3	0,5	0,4	0,5	0,4	0,5	0,6

*R = Replikasi

Batch 3

No	Kekerasan Tablet (kgf)											
	F I			F II			F III			F IV		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	12,6	12,6	13,5	13,1	14,5	14,9	16,1	16,7	15,3	17,3	18,1	18,5
2	12,0	11,1	14,9	13,2	13,5	13,6	15,4	16,7	16,6	18,1	18,3	17,4
3	12,6	11,1	11,9	13,7	13,7	13,7	15,8	16,4	16,0	17,9	17,8	18,0
4	11,8	13,6	13,0	13,0	13,4	13,4	16,4	15,9	15,1	17,7	18,2	18,0
5	13,3	13,1	11,7	13,4	14,0	14,4	15,2	16,0	15,9	17,3	17,1	17,2
6	11,8	13,5	13,1	13,8	13,7	14,9	16,0	16,4	16,6	18,0	17,7	17,8
7	13,1	11,8	12,0	13,7	13,9	13,7	15,4	16,6	15,3	17,4	18,3	17,7
8	11,9	12,9	12,1	14,5	13,9	13,9	16,4	15,7	16,0	17,2	17,1	17,9
9	13,1	12,2	13,9	13,5	13,1	13,8	16,9	16,5	16,5	17,2	17,3	17,5
10	12,3	11,4	13,8	13,7	13,9	13,0	15,1	16,1	15,2	17,0	18,7	17,1
$\bar{X}$	12,45	12,33	12,99	13,56	13,76	13,93	15,87	16,3	15,85	17,51	17,86	17,71
SD	0,6	1,0	1,1	0,4	0,4	0,6	0,6	0,4	0,6	0,4	0,6	0,4

*R = Replikasi

LAMPIRAN E

HASIL UJI KERAPUHAN TABLET LEPAS LAMBAT METFORMIN HCl

Batch 1

Formula	Replikasi	Wo (g)	W (g)	Kerapuhan (%)
I	I	13,92	13,83	0,65
	II	13,97	13,87	0,72
	III	13,94	13,85	0,65
II	I	13,95	13,88	0,50
	II	13,92	13,86	0,43
	III	13,93	13,86	0,50
III	I	13,96	13,92	0,29
	II	13,95	13,90	0,36
	III	13,97	13,92	0,36
IV	I	14,03	14,00	0,21
	II	14,01	13,99	0,14
	III	14,05	14,02	0,21

Batch 2

Formula	Replikasi	Wo (g)	W (g)	Kerapuhan (%)
I	I	14,01	13,92	0,64
	II	14,02	13,93	0,64
	III	14,05	13,95	0,71
II	I	14,16	14,09	0,49
	II	14,13	14,06	0,50
	III	14,17	14,10	0,49
III	I	14,02	13,97	0,36
	II	14,05	14,01	0,28
	III	14,03	13,98	0,36
IV	I	14,09	14,06	0,21
	II	14,12	14,10	0,14
	III	14,08	14,06	0,14

Batch 3

Formula	Replikasi	Wo (g)	W (g)	Kerapuhan (%)
I	I	14,12	14,03	0,64
	II	14,22	14,13	0,63
	III	14,16	14,07	0,64
II	I	14,19	14,12	0,49
	II	13,46	13,40	0,45
	III	14,15	14,08	0,49
III	I	13,84	13,79	0,36
	II	13,96	13,91	0,36
	III	13,95	13,91	0,29
IV	I	14,02	13,99	0,21
	II	13,92	13,89	0,22
	III	13,99	13,97	0,14

LAMPIRAN F

HASIL UJI PENETAPAN KADAR TABLET LEPAS LAMBAT METFORMIN HCl

1. Hasil Uji Penetapan Kadar Tablet Lepas Lambat Metformin HCl

Batch 1

Formula	Replikasi	Absorbansi	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
I	1	0,352	4,081	4,014	101,69
	2	0,352	4,081	4,011	101,76
	3	0,350	4,056	4,003	101,32
II	1	0,348	4,030	4,006	100,62
	2	0,350	4,056	4,009	101,18
	3	0,352	4,081	4,011	101,76
III	1	0,349	4,043	4,000	101,09
	2	0,351	4,069	4,009	101,50
	3	0,348	4,030	4,000	100,77
IV	1	0,347	4,018	4,000	100,45
	2	0,348	4,030	4,006	100,59
	3	0,348	4,030	4,000	100,77

Batch 2

Formula	Replikasi	Absorbansi	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
I	1	0,351	4,069	4,011	101,45
	2	0,348	4,030	4,000	100,77
	3	0,351	4,069	4,003	101,65
II	1	0,352	4,081	4,011	101,76
	2	0,351	4,069	4,014	101,37
	3	0,346	4,005	4,003	100,05
III	1	0,349	4,043	4,011	100,81
	2	0,351	4,069	4,003	101,65
	3	0,347	4,018	4,000	100,45
IV	1	0,349	4,043	4,009	100,84
	2	0,348	4,030	4,006	100,59
	3	0,350	4,056	4,009	101,82

Batch 3

Formula	Replikasi	Absorbansi	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
I	1	0,348	4,030	4,003	100,67
	2	0,351	4,069	4,014	101,37
	3	0,347	4,018	4,000	100,45
II	1	0,350	4,056	4,014	101,46
	2	0,352	4,081	4,014	101,69
	3	0,349	4,043	4,006	100,93
III	1	0,346	4,005	4,003	100,05
	2	0,348	4,030	4,003	100,69
	3	0,346	4,005	4,003	100,05
IV	1	0,347	4,018	4,003	100,37
	2	0,350	4,056	4,009	101,18
	3	0,348	4,030	4,003	100,69

LAMPIRAN G

HASIL UJI DISOLUSI TABLET LEPAS LAMBAT METFORMIN HCl

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula I *batch* 1

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,224	2,935	80	234,85	211,37	42,27	3170,59
	60	0,306	3,989	80	319,17	287,26	57,45	7479,49
	90	0,317	4,131	80	330,48	297,44	59,49	8770,49
	120	0,379	4,928	80	394,24	354,82	70,96	9783,86
	180	0,384	4,992	80	399,38	359,44	71,89	21427,87
	240	0,388	5,043	80	403,49	363,15	72,63	21677,74
	300	0,392	5,095	80	407,60	366,85	73,37	21899,85
	360	0,387	5,030	80	402,46	362,22	72,44	22038,66
2	30	0,228	2,987	80	238,97	215,07	43,01	3226,12
	60	0,316	4,118	80	329,46	296,51	59,30	7673,83
	90	0,327	4,259	80	340,77	306,69	61,34	9048,12
	120	0,382	4,966	80	397,32	357,59	71,52	9964,32
	180	0,389	5,056	80	404,52	364,07	72,81	21649,97
	240	0,39	5,069	80	405,55	365,00	73,00	21872,08
	300	0,392	5,095	80	407,61	366,85	73,37	21955,37
	360	0,395	5,133	80	410,69	369,62	73,92	22094,19
3	30	0,222	2,910	80	232,80	209,52	41,90	3142,83
	60	0,31	4,041	80	323,29	290,96	58,19	7507,25
	90	0,32	4,169	80	333,57	300,22	60,04	8867,66
	120	0,378	4,915	80	393,21	353,89	70,78	9811,62
	180	0,386	5,017	80	401,44	361,30	72,26	21455,63
	240	0,389	5,056	80	404,52	364,07	72,81	21761,03
	300	0,392	5,095	80	407,61	366,85	73,37	21927,61
	360	0,392	5,095	80	407,61	366,85	73,37	22010,90

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula I *batch* 2

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,217	2,846	80	227,66	204,89	40,98	3073,42
	60	0,295	3,848	80	307,87	277,08	55,42	7229,61
	90	0,311	4,054	80	324,32	291,89	58,38	8534,50
	120	0,37	4,812	80	384,99	346,49	69,30	9575,63
	180	0,379	4,928	80	394,24	354,82	70,96	21039,18
	240	0,381	4,954	80	396,30	356,67	71,33	21344,58
	300	0,382	4,967	80	397,33	357,59	71,52	21427,87
	360	0,382	4,967	80	397,33	357,59	71,52	21455,63
2	30	0,222	2,910	80	232,80	209,52	41,90	3142,83
	60	0,294	3,835	80	306,84	276,15	55,23	7285,14
	90	0,321	4,182	80	334,60	301,14	60,22	8659,43
	120	0,375	4,876	80	390,13	351,12	70,22	9783,86
	180	0,384	4,992	80	399,38	359,44	71,88	21316,81
	240	0,386	5,017	80	401,44	361,30	72,25	21622,21
	300	0,389	5,056	80	404,52	364,07	72,81	21761,03
	360	0,39	5,069	80	405,55	365,00	72,99	21872,08
3	30	0,225	2,948	80	235,89	212,30	42,45	3184,47
	60	0,299	3,899	80	311,98	280,78	56,15	7396,20
	90	0,323	4,208	80	336,66	302,99	60,59	8756,61
	120	0,376	4,889	80	391,16	352,04	70,40	9825,50
	180	0,389	5,056	80	404,52	364,07	72,81	21483,39
	240	0,391	5,082	80	406,58	365,92	73,18	21899,85
	300	0,392	5,095	80	407,61	366,85	73,36	21983,14
	360	0,393	5,107	80	408,64	367,77	73,55	22038,66

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula I *batch* 3

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,225	2,949	80	235,89	212,30	42,46	3184,47
	60	0,316	4,118	80	329,46	296,51	59,30	7632,19
	90	0,324	4,221	80	337,69	303,92	60,78	9006,48
	120	0,384	4,992	80	399,38	359,44	71,89	9950,44
	180	0,389	5,057	80	404,52	364,07	72,81	21705,50
	240	0,394	5,121	80	409,67	368,70	73,74	21983,14
	300	0,394	5,121	80	409,67	368,70	73,74	22121,95
	360	0,393	5,108	80	408,64	367,77	73,55	22177,48
2	30	0,225	2,948	80	235,89	212,30	42,46	3184,47
	60	0,309	4,028	80	322,26	290,04	58,01	7535,01
	90	0,327	4,259	80	340,77	306,69	61,34	8950,95
	120	0,377	4,902	80	392,19	352,97	70,59	9894,91
	180	0,385	5,005	80	400,41	360,37	72,07	21400,10
	240	0,388	5,043	80	403,50	363,15	72,63	21705,50
	300	0,39	5,069	80	405,55	365,00	73,00	21844,32
	360	0,393	5,107	80	408,64	367,77	73,55	21983,14
3	30	0,228	2,987	80	238,97	215,07	43,01	3226,12
	60	0,317	4,131	80	330,49	297,44	59,49	7687,71
	90	0,331	4,311	80	344,88	310,40	62,08	9117,53
	120	0,385	5,005	80	400,41	360,37	72,07	10061,49
	180	0,389	5,056	80	404,52	364,07	72,81	21733,26
	240	0,393	5,107	80	408,64	367,77	73,55	21955,37
	300	0,395	5,133	80	410,69	369,62	73,92	22121,95
	360	0,397	5,159	80	412,75	371,48	74,30	22233,01

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula II *batch* 1

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,108	1,444	80	115,58	104,02	20,80	1560,31
	60	0,216	2,832	80	226,63	203,97	40,79	4619,85
	90	0,264	3,449	80	275,99	248,39	49,68	6785,40
	120	0,322	4,195	80	335,63	302,07	60,41	8256,86
	180	0,439	5,699	80	455,94	410,34	82,07	21372,34
	240	0,442	5,737	80	459,02	413,12	82,62	24703,96
	300	0,445	5,776	80	462,11	415,90	83,18	24870,54
	360	0,443	5,750	80	460,05	414,05	82,81	25009,36
2	30	0,111	1,483	80	118,66	106,80	21,36	1601,95
	60	0,22	2,884	80	230,75	207,67	41,53	4717,02
	90	0,271	3,539	80	283,19	254,87	50,97	6938,10
	120	0,326	4,246	80	339,74	305,77	61,15	8409,56
	180	0,444	5,763	80	461,08	414,97	82,99	21622,21
	240	0,448	5,814	80	465,19	418,67	83,73	25009,36
	300	0,449	5,827	80	466,22	419,60	83,92	25148,17
	360	0,45	5,840	80	467,25	420,52	84,10	25203,70
3	30	0,114	1,521	80	121,75	109,57	21,91	1643,60
	60	0,223	2,922	80	233,83	210,45	42,09	4800,31
	90	0,276	3,604	80	288,33	259,50	51,90	7049,15
	120	0,328	4,272	80	341,80	307,62	61,52	8506,74
	180	0,449	5,827	80	466,22	419,60	83,92	21816,56
	240	0,451	5,853	80	468,28	421,45	84,29	25231,47
	300	0,452	5,866	80	469,31	422,38	84,48	25314,76
	360	0,454	5,892	80	471,36	424,23	84,85	25398,05

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula II *batch* 2

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,114	1,522	80	121,75	109,57	21,91	1643,60
	60	0,222	2,910	80	232,80	209,52	41,90	4786,43
	90	0,269	3,514	80	281,13	253,02	50,60	6938,10
	120	0,328	4,272	80	341,80	307,62	61,52	8409,56
	180	0,445	5,776	80	462,11	415,90	83,18	21705,50
	240	0,446	5,789	80	463,14	416,82	83,36	24981,59
	300	0,447	5,802	80	464,16	417,75	83,55	25037,12
	360	0,447	5,802	80	464,16	417,75	83,55	25064,88
2	30	0,113	1,508	80	120,72	108,65	21,73	1629,72
	60	0,224	2,935	80	234,86	211,37	42,27	4800,31
	90	0,273	3,565	80	285,24	256,72	51,34	7021,39
	120	0,329	4,285	80	342,83	308,55	61,71	8478,97
	180	0,447	5,802	80	464,16	417,75	83,55	21788,79
	240	0,449	5,827	80	466,22	419,60	83,92	25120,41
	300	0,45	5,840	80	467,25	420,52	84,10	25203,70
	360	0,45	5,840	80	467,25	420,52	84,10	25231,47
3	30	0,111	1,483	80	118,66	106,80	21,36	1601,95
	60	0,226	2,961	80	236,92	213,22	42,64	4800,31
	90	0,273	3,565	80	285,24	256,72	51,34	7049,15
	120	0,327	4,259	80	340,77	306,69	61,34	8451,21
	180	0,445	5,776	80	462,11	415,90	83,18	21677,74
	240	0,448	5,814	80	465,19	418,67	83,73	25037,12
	300	0,451	5,853	80	468,28	421,45	84,29	25203,70
	360	0,454	5,892	80	471,36	424,23	84,85	25370,28

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula II *batch* 3

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,105	1,406	80	112,49	101,24	20,25	1518,66
	60	0,219	2,871	80	229,72	206,75	41,35	4619,85
	90	0,272	3,553	80	284,22	255,79	51,16	6938,10
	120	0,33	4,298	80	343,86	309,47	61,89	8478,97
	180	0,44	5,712	80	456,97	411,27	82,25	21622,21
	240	0,441	5,725	80	457,99	412,20	82,44	24703,96
	300	0,443	5,751	80	460,05	414,05	82,81	24787,25
	360	0,442	5,738	80	459,02	413,12	82,62	24898,30
2	30	0,109	1,457	80	116,61	104,95	20,99	1574,19
	60	0,219	2,871	80	229,72	206,75	41,35	4675,37
	90	0,27	3,526	80	282,16	253,94	50,79	6910,33
	120	0,323	4,208	80	336,66	302,99	60,60	8354,04
	180	0,441	5,724	80	457,99	412,20	82,44	21455,63
	240	0,443	5,750	80	460,05	414,05	82,81	24787,25
	300	0,444	5,763	80	461,08	414,97	82,99	24870,54
	360	0,448	5,814	80	465,19	418,67	83,73	25009,36
3	30	0,118	1,573	80	125,86	113,28	22,66	1699,13
	60	0,229	3,000	80	240,00	216,00	43,20	4939,13
	90	0,281	3,668	80	293,47	264,12	52,82	7201,85
	120	0,325	4,233	80	338,71	304,84	60,97	8534,50
	180	0,453	5,879	80	470,33	423,30	84,66	21844,32
	240	0,456	5,917	80	473,42	426,08	85,22	25481,34
	300	0,458	5,943	80	475,48	427,93	85,59	25620,15
	360	0,459	5,956	80	476,50	428,85	85,77	25703,44

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula III *batch* 1

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,054	0,750	80	60,05	54,05	10,81	810,69
	60	0,132	1,753	80	140,26	126,23	25,25	2704,16
	90	0,167	2,203	80	176,25	158,62	31,72	4272,80
	120	0,212	2,781	80	222,52	200,27	40,05	5383,34
	180	0,262	3,424	80	273,93	246,54	49,31	13404,22
	240	0,339	4,413	80	353,11	317,80	63,56	16930,18
	300	0,386	5,017	80	401,44	361,30	72,26	20372,85
	360	0,405	5,262	80	420,98	378,88	75,78	22205,24
2	30	0,057	0,789	80	63,14	56,82	11,36	852,34
	60	0,135	1,791	80	143,34	129,01	25,80	2787,46
	90	0,169	2,228	80	178,30	160,47	32,09	4342,21
	120	0,217	2,845	80	227,66	204,89	40,98	5480,51
	180	0,265	3,462	80	277,02	249,32	49,86	13626,32
	240	0,342	4,452	80	356,20	320,58	64,12	17096,76
	300	0,389	5,056	80	404,52	364,07	72,81	20539,43
	360	0,415	5,390	80	431,26	388,13	77,63	22566,17
3	30	0,054	0,750	80	60,05	54,05	10,81	810,69
	60	0,136	1,804	80	144,37	129,93	25,99	2759,69
	90	0,171	2,254	80	180,36	162,32	32,46	4383,86
	120	0,219	2,871	80	229,72	206,75	41,35	5536,04
	180	0,269	3,514	80	281,13	253,02	50,60	13792,90
	240	0,347	4,516	80	361,34	325,20	65,04	17346,63
	300	0,391	5,082	80	406,58	365,92	73,18	20733,78
	360	0,413	5,365	80	429,20	386,28	77,26	22566,17

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula III *batch* 2

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,051	0,712	80	56,97	51,27	10,25	769,05
	60	0,124	1,650	80	132,03	118,83	23,77	2551,47
	90	0,164	2,165	80	173,16	155,85	31,17	4120,10
	120	0,207	2,717	80	217,38	195,64	39,13	5272,29
	180	0,259	3,386	80	270,85	243,76	48,75	13182,11
	240	0,335	4,362	80	349,00	314,10	62,82	16735,84
	300	0,383	4,979	80	398,35	358,52	71,70	20178,51
	360	0,402	5,224	80	417,89	376,10	75,22	22038,66
2	30	0,053	0,737	80	59,02	53,12	10,62	796,81
	60	0,131	1,740	80	139,23	125,31	25,06	2676,40
	90	0,168	2,215	80	177,28	159,55	31,91	4272,80
	120	0,211	2,768	80	221,49	199,34	39,87	5383,34
	180	0,262	3,424	80	273,93	246,54	49,31	13376,45
	240	0,339	4,413	80	353,11	317,80	63,56	16930,18
	300	0,389	5,056	80	404,52	364,07	72,81	20456,14
	360	0,412	5,352	80	428,17	385,36	77,07	22482,88
3	30	0,052	0,724	80	57,99	52,20	10,44	782,93
	60	0,134	1,778	80	142,31	128,08	25,62	2704,16
	90	0,173	2,280	80	182,42	164,17	32,83	4383,86
	120	0,216	2,832	80	226,63	203,97	40,79	5522,16
	180	0,269	3,514	80	281,13	253,02	50,60	13709,61
	240	0,342	4,452	80	356,20	320,58	64,12	17207,81
	300	0,395	5,133	80	410,69	369,62	73,92	20706,02
	360	0,415	5,390	80	431,26	388,13	77,63	22732,75

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula III *batch* 3

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,058	0,802	80	64,16	57,75	11,55	866,22
	60	0,136	1,805	80	144,37	129,93	25,99	2815,22
	90	0,171	2,254	80	180,36	162,32	32,46	4383,86
	120	0,214	2,807	80	224,58	202,12	40,42	5466,63
	180	0,266	3,476	80	278,05	250,24	50,05	13570,80
	240	0,345	4,491	80	359,28	323,35	64,67	17207,81
	300	0,389	5,057	80	404,52	364,07	72,81	20622,72
	360	0,406	5,275	80	422,01	379,80	75,96	22316,30
2	30	0,056	0,776	80	62,11	55,89	11,17	838,46
	60	0,132	1,753	80	140,26	126,23	25,24	2731,93
	90	0,17	2,241	80	179,33	161,39	32,27	4314,45
	120	0,214	2,807	80	224,58	202,11	40,42	5452,75
	180	0,266	3,475	80	278,05	250,24	50,04	13570,80
	240	0,336	4,375	80	350,03	315,02	63,00	16957,94
	300	0,382	4,966	80	397,33	357,59	71,51	20178,51
	360	0,408	5,300	80	424,06	381,65	76,33	22177,48
3	30	0,055	0,763	80	61,08	54,97	10,99	824,58
	60	0,138	1,830	80	146,43	131,78	26,35	2801,34
	90	0,176	2,318	80	185,50	166,95	33,39	4481,03
	120	0,216	2,832	80	226,63	203,96	40,79	5563,80
	180	0,274	3,578	80	286,27	257,64	51,52	13848,43
	240	0,349	4,542	80	363,39	327,05	65,41	17540,98
	300	0,389	5,056	80	404,52	364,07	72,81	20733,78
	360	0,402	5,223	80	417,89	376,10	75,22	22205,24

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula IV *batch* 1

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,048	0,673	80	53,88	48,49	9,70	713,52
	60	0,124	1,650	80	132,03	118,82	23,77	2495,94
	90	0,142	1,881	80	150,53	135,48	27,10	3814,70
	120	0,169	2,228	80	178,30	160,47	32,09	4439,38
	180	0,222	2,910	80	232,80	209,52	41,90	11099,85
	240	0,258	3,372	80	269,82	242,83	48,57	13570,80
	300	0,34	4,426	80	354,13	318,72	63,74	16846,89
	360	0,38	4,940	80	395,26	355,74	71,15	20234,04
2	30	0,048	0,673	80	53,88	48,49	9,70	727,40
	60	0,126	1,676	80	134,08	120,67	24,14	2537,58
	90	0,144	1,907	80	152,59	137,33	27,47	3870,23
	120	0,17	2,241	80	179,33	161,39	32,28	4481,03
	180	0,224	2,935	80	234,85	211,37	42,27	11183,14
	240	0,261	3,411	80	272,90	245,61	49,12	13709,61
	300	0,341	4,439	80	355,16	319,65	63,93	16957,94
	360	0,382	4,966	80	397,32	357,59	71,52	20317,33
3	30	0,044	0,622	80	49,76	44,79	8,96	671,88
	60	0,129	1,714	80	137,17	123,45	24,69	2523,70
	90	0,147	1,946	80	155,68	140,11	28,02	3953,52
	120	0,173	2,280	80	182,41	164,17	32,83	4564,32
	180	0,226	2,961	80	236,91	213,22	42,64	11321,95
	240	0,264	3,449	80	275,98	248,39	49,68	13848,43
	300	0,345	4,491	80	359,28	323,35	64,67	17152,29
	360	0,384	4,992	80	399,38	359,44	71,89	20483,91

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula IV *batch* 2

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,045	0,635	80	50,80	45,72	9,14	685,76
	60	0,12	1,599	80	127,92	115,13	23,03	2412,65
	90	0,135	1,792	80	143,34	129,01	25,80	3662,01
	120	0,164	2,165	80	173,16	155,85	31,17	4272,80
	180	0,218	2,859	80	228,69	205,82	41,16	10849,97
	240	0,253	3,308	80	264,68	238,21	47,64	13320,93
	300	0,336	4,375	80	350,03	315,02	63,00	16597,02
	360	0,372	4,838	80	387,04	348,34	69,67	19900,87
2	30	0,046	0,647	80	51,82	46,642	9,328	699,64
	60	0,122	1,624	80	129,97	116,97	23,39	2454,29
	90	0,138	1,830	80	146,42	131,78	26,35	3731,41
	120	0,167	2,203	80	176,24	158,62	31,72	4356,09
	180	0,221	2,897	80	231,77	208,59	41,71	11016,56
	240	0,256	3,347	80	267,76	240,98	48,19	13487,51
	300	0,339	4,413	80	353,11	317,79	63,55	16763,60
	360	0,377	4,902	80	392,18	352,96	70,59	20122,98
3	30	0,048	0,673	80	53,881	48,493	9,69	727,40
	60	0,127	1,688	80	135,11	121,60	24,32	2551,47
	90	0,135	1,791	80	143,34	129,00	25,80	3759,18
	120	0,175	2,305	80	184,47	166,02	33,20	4425,50
	180	0,22	2,884	80	230,74	207,6	41,53	11210,90
	240	0,259	3,385	80	270,84	243,76	48,75	13543,03
	300	0,346	4,503	80	360,30	324,27	64,85	17041,23
	360	0,386	5,017	80	401,43	361,29	72,25	20567,20

Hasil Uji Disolusi Tablet Lepas Lambat Metformin HCl Formula IV *batch* 3

Rep	t (menit)	Abs	C sampel (µg/ml)	FP	C sebenarnya (µg/ml)	Wt (mg)	% obat lepas	AUC
1	30	0,049	0,686	80	54,91	49,42	9,88	741,29
	60	0,127	1,689	80	135,12	121,60	24,32	2565,35
	90	0,145	1,920	80	153,62	138,26	27,65	3897,99
	120	0,173	2,280	80	182,42	164,17	32,83	4536,56
	180	0,227	2,974	80	237,94	214,15	42,83	11349,72
	240	0,263	3,437	80	274,96	247,47	49,49	13848,43
	300	0,341	4,440	80	355,17	319,65	63,93	17013,47
	360	0,383	4,979	80	398,35	358,52	71,70	20345,09
2	30	0,046	0,647	80	51,82	46,64	9,32	699,64
	60	0,125	1,663	80	133,05	119,75	23,95	2495,94
	90	0,14	1,856	80	148,48	133,63	26,72	3800,82
	120	0,165	2,177	80	174,19	156,77	31,35	4356,09
	180	0,225	2,948	80	235,88	212,29	42,45	11072,08
	240	0,251	3,283	80	262,62	236,35	47,27	13459,74
	300	0,345	4,491	80	359,28	323,35	64,67	16791,36
	360	0,383	4,979	80	398,35	358,51	71,70	20456,14
3	30	0,044	0,622	80	49,768	44,791	8,95	671,88
	60	0,135	1,791	80	143,34	129,00	25,80	2606,99
	90	0,145	1,920	80	153,62	138,26	27,65	4009,05
	120	0,172	2,267	80	181,38	163,24	32,64	4522,67
	180	0,229	3,000	80	240,00	216,00	43,20	11377,48
	240	0,263	3,437	80	274,96	247,46	49,49	13903,96
	300	0,352	4,580	80	366,47	329,83	65,96	17318,87
	360	0,389	5,056	80	404,52	364,07	72,81	20817,07

LAMPIRAN H

PERSAMAAN REGRESI LINIER HASIL UJI DISOLUSI

Formula	Replikasi		Persamaan regresi		
			Orde nol	Orde satu	*Higuchi*
I	1	k	2,652	0,023	35,06
		r	1,000	-1,000	1,00
	2	k	2,301	0,020	30,44
		r	1,000	-1,000	1,00
	3	k	2,702	0,022	34,65
		r	1,000	-1,000	1,00
		k	2,552	0,022	33,383
		r	1,000	-1,000	1,000
II	1	k	1,961	0,024	37,63
		r	0,991	0,931	1,00
	2	k	1,957	0,028	37,56
		r	0,989	0,916	1,00
	3	k	1,960	0,025	37,65
		r	0,988	0,928	1,00
		k	1,959	0,026	37,613
		r	0,989	0,925	1,000
III	1	k	0,972	0,009	24,66
		r	0,980	0,967	1,00
	2	k	0,979	0,009	24,83
		r	0,981	0,962	1,00
	3	k	0,955	0,009	24,29
		r	0,978	0,965	1,00
		k	0,969	0,009	24,593
		r	0,980	0,965	1,000
IV	1	k	0,872	0,006	21,78
		r	0,988	0,946	0,99
	2	k	0,870	0,006	21,72
		r	0,989	0,940	0,99
	3	k	0,879	0,006	21,95
		r	0,987	0,940	0,99
		k	0,874	0,006	21,817
		r	0,988	0,942	0,990

LAMPIRAN I

CONTOH PERHITUNGAN

Contoh perhitungan sudut diam:

W persegi panjang = 4,8475 g

W lingkaran = 1,2378 g

Luas persegi panjang = 623,7 cm^2

Luas lingkaran = $\frac{1,2378}{4,8475} x 623,7 = 159,26$ cm^2

$A = \pi r^2$

$r^2 = \frac{A}{\pi} = \frac{159,26}{3,14} = 50,72$

$r = 7,12$

$tg \propto = \frac{t}{r} = \frac{3,72}{7,12} = 0,52$

$\propto = 27,47$

Contoh perhitungan akurasi dan presisi:

Konsentrasi teoritis = 140,2 mg sampel (1001,42 µg/ml) : 10 ml x 0,04 ml = 4,006 µg/ml

Absorbansi sampel = 0,349 dimasukkan pada persamaan regresi sebagai nilai y sehingga didapatkan nilai x sebagai konsentrasi sampel (µg/ml) = 4,04 µg/ml

Persen perolehan kembali = $\frac{4,04}{4,006} x\ 100\% = 100,8\%$

KV = $\frac{SD}{X} x\ 100\% = \frac{1,28}{99,72} x\ 100\% = 1,28\%$

Contoh perhitungan disolusi:

Absorbansi sampel = 0,048 dimasukkan pada persamaan regresi sebagai nilai y sehingga didapatkan nilai x sebagai konsentrasi sampel (µg/ml) = 0,673 µg/ml.

Konsentrasi sampel dikalikan dengan faktor pengenceran (FP) = 80, maka dihasilkan konsentrasi sebenarnya = 53,88 µg/ml.

Konsentrasi sebenarnya dikalikan dengan volume media disolusi (Liter) = 0,9 Liter, maka dihasilkan Wt = 49,49 mg.

Persen obat lepas dihasilkan dari Wt dibagi dengan kadar obat sehingga dihasilkan 9,70%.

Cara menghitung persen ED_{360}:

Menghitung AUC = $\frac{Wtn+Wt(n-1)}{2} x(t_n - t_{n-1})$

$= \frac{49,42+0}{2} x(30-0)$

$= 741,29$

Luas persegi panjang = menit terakhir x dosis

= 360 x 500

= 180000

$\%ED_{360} = \frac{\sum AUC}{Luas\ persegi\ panjang} x100\%$

$= \frac{118136,45}{180000} x100\%$

= 65,63%

LAMPIRAN J

HASIL UJI STATISTIK ANTAR *BATCH*

1. Uji Keseragaman Bobot

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	60	6.9916E2	3.43162	.44302	698.2719	700.0448	691.10	706.40
	Batch 2	60	6.9937E2	3.34920	.43238	698.5031	700.2335	693.30	705.70
	Batch 3	60	6.9939E2	2.58718	.33400	698.7250	700.0617	693.80	704.50
	Total	180	6.9931E2	3.12988	.23329	698.8463	699.7670	691.10	706.40
Formula 2	Batch 1	60	6.9851E2	3.46785	.44770	697.6142	699.4058	690.00	705.70
	Batch 2	60	6.9906E2	3.23956	.41822	698.2181	699.8919	693.50	705.70
	Batch 3	60	6.9878E2	2.96981	.38340	698.0095	699.5439	693.60	705.60
	Total	180	6.9878E2	3.22179	.24014	698.3067	699.2544	690.00	705.70
Formula 3	Batch 1	60	6.9862E2	3.21007	.41442	697.7891	699.4476	691.80	705.90
	Batch 2	60	6.9878E2	3.44400	.44462	697.8870	699.6663	693.20	705.60
	Batch 3	60	6.9906E2	3.07347	.39678	698.2610	699.8490	693.80	706.80
	Total	180	6.9882E2	3.23301	.24097	698.3412	699.2922	691.80	706.80
Formula 4	Batch 1	60	6.9870E2	3.16488	.40858	697.8841	699.5192	692.30	705.20
	Batch 2	60	6.9871E2	2.71753	.35083	698.0080	699.4120	693.70	705.10
	Batch 3	60	6.9889E2	3.09667	.39978	698.0900	699.6900	693.50	704.60
	Total	180	6.9877E2	2.98396	.22241	698.3283	699.2061	692.30	705.20

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	1.799	2	177	.169
Formula 2	.474	2	177	.623
Formula 3	.913	2	177	.403
Formula 4	1.100	2	177	.335

ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Formula 1	Between Groups	1.999	2	.999	.101	.904
	Within Groups	1751.513	177	9.896		
	Total	1753.512	179			
Formula 2	Between Groups	8.912	2	4.456	.427	.653
	Within Groups	1849.090	177	10.447		
	Total	1858.002	179			
Formula 3	Between Groups	5.864	2	2.932	.278	.757
	Within Groups	1865.106	177	10.537		
	Total	1870.970	179			
Formula 4	Between Groups	1.359	2	.679	.076	.927
	Within Groups	1592.458	177	8.997		
	Total	1593.817	179			

2. Uji Keseragaman Ukuran

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	60	.44833	.002377	.000307	.44772	.44895	.445	.450
	Batch 2	60	.44875	.002183	.000282	.44819	.44931	.445	.450
	Batch 3	60	.44825	.002405	.000310	.44763	.44887	.445	.450
	Total	180	.44844	.002321	.000173	.44810	.44879	.445	.450
Formula 2	Batch 1	60	.44892	.002077	.000268	.44838	.44945	.445	.450
	Batch 2	60	.44842	.002346	.000303	.44781	.44902	.445	.450
	Batch 3	60	.44875	.002183	.000282	.44819	.44931	.445	.450
	Total	180	.44869	.002202	.000164	.44837	.44902	.445	.450
Formula 3	Batch 1	60	.44825	.002405	.000310	.44763	.44887	.445	.450
	Batch 2	60	.44858	.002272	.000293	.44800	.44917	.445	.450
	Batch 3	60	.44867	.002230	.000288	.44809	.44924	.445	.450
	Total	180	.44850	.002298	.000171	.44816	.44884	.445	.450
Formula 4	Batch 1	60	.44867	.002230	.000288	.44809	.44924	.445	.450
	Batch 2	60	.44883	.002133	.000275	.44828	.44938	.445	.450
	Batch 3	60	.44867	.002230	.000288	.44809	.44924	.445	.450
	Total	180	.44872	.002187	.000163	.44840	.44904	.445	.450

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	3.633	2	177	.028
Formula 2	3.010	2	177	.052
Formula 3	1.952	2	177	.145
Formula 4	.482	2	177	.618

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	.000	2	.000	.797	.452
	Within Groups	.001	177	.000		
	Total	.001	179			
Formula 2	Between Groups	.000	2	.000	.800	.451
	Within Groups	.001	177	.000		
	Total	.001	179			
Formula 3	Between Groups	.000	2	.000	.550	.578
	Within Groups	.001	177	.000		
	Total	.001	179			
Formula 4	Between Groups	.000	2	.000	.115	.891
	Within Groups	.001	177	.000		
	Total	.001	179			

3. Uji Kekerasan Tablet

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	30	12.257	.8561	.1563	11.937	12.576	11.1	13.9
	Batch 2	30	12.533	1.0240	.1869	12.151	12.916	11.2	15.8
	Batch 3	30	12.590	.9030	.1649	12.253	12.927	11.1	14.9
	Total	90	12.460	.9314	.0982	12.265	12.655	11.1	15.8
Formula 2	Batch 1	30	13.527	.3503	.0640	13.396	13.657	13.1	14.4
	Batch 2	30	13.573	.4354	.0795	13.411	13.736	13.0	14.6
	Batch 3	30	13.750	.4967	.0907	13.565	13.935	13.0	14.9
	Total	90	13.617	.4376	.0461	13.525	13.708	13.0	14.9
Formula 3	Batch 1	30	15.993	.5298	.0967	15.796	16.191	15.2	16.9
	Batch 2	30	15.903	.4965	.0907	15.718	16.089	15.0	16.6
	Batch 3	30	16.007	.5502	.1005	15.801	16.212	15.1	16.9
	Total	90	15.968	.5221	.0550	15.858	16.077	15.0	16.9
Formula 4	Batch 1	30	17.937	.4635	.0846	17.764	18.110	17.1	18.9
	Batch 2	30	17.940	.5103	.0932	17.749	18.131	17.0	18.9
	Batch 3	30	17.693	.4668	.0852	17.519	17.868	17.0	18.7
	Total	90	17.857	.4892	.0516	17.754	17.959	17.0	18.9

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	.197	2	87	.822
Formula 2	1.261	2	87	.289
Formula 3	.040	2	87	.961
Formula 4	.387	2	87	.680

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	1.909	2	.954	1.103	.337
	Within Groups	75.307	87	.866		
	Total	77.216	89			
Formula 2	Between Groups	.833	2	.416	2.234	.113
	Within Groups	16.212	87	.186		
	Total	17.045	89			
Formula 3	Between Groups	.190	2	.095	.343	.711
	Within Groups	24.067	87	.277		
	Total	24.257	89			
Formula 4	Between Groups	1.201	2	.600	2.598	.080
	Within Groups	20.100	87	.231		
	Total	21.301	89			

4. Uji Kerapuhan Tablet

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	.6733	.04041	.02333	.5729	.7737	.65	.72
	Batch 2	3	.6633	.04041	.02333	.5629	.7637	.64	.71
	Batch 3	3	.6367	.00577	.00333	.6223	.6510	.63	.64
	Total	9	.6578	.03308	.01103	.6323	.6832	.63	.72
Formula 2	Batch 1	3	.4767	.04041	.02333	.3763	.5771	.43	.50
	Batch 2	3	.4933	.00577	.00333	.4790	.5077	.49	.50
	Batch 3	3	.4767	.02309	.01333	.4193	.5340	.45	.49
	Total	9	.4822	.02489	.00830	.4631	.5014	.43	.50
Formula 3	Batch 1	3	.3367	.04041	.02333	.2363	.4371	.29	.36
	Batch 2	3	.3333	.04619	.02667	.2186	.4481	.28	.36
	Batch 3	3	.3367	.04041	.02333	.2363	.4371	.29	.36
	Total	9	.3356	.03678	.01226	.3073	.3638	.28	.36
Formula 4	Batch 1	3	.1867	.04041	.02333	.0863	.2871	.14	.21
	Batch 2	3	.1633	.04041	.02333	.0629	.2637	.14	.21
	Batch 3	3	.1900	.04359	.02517	.0817	.2983	.14	.22
	Total	9	.1800	.03808	.01269	.1507	.2093	.14	.22

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	5.818	2	6	.039
Formula 2	6.545	2	6	.031
Formula 3	.099	2	6	.907
Formula 4	.025	2	6	.976

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	.002	2	.001	.980	.428
	Within Groups	.007	6	.001		
	Total	.009	8			
Formula 2	Between Groups	.001	2	.000	.379	.700
	Within Groups	.004	6	.001		
	Total	.005	8			
Formula 3	Between Groups	.000	2	.000	.006	.994
	Within Groups	.011	6	.002		
	Total	.011	8			
Formula 4	Between Groups	.001	2	.001	.368	.707
	Within Groups	.010	6	.002		
	Total	.012	8			

5. Hasil Uji Akurasi Penetapan Kadar

Konsentrasi 100%

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Konsentrasi	6	99.5600	1.21367	.49548

One-Sample Test

	Test Value = 100					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Konsentrasi	-.888	5	.415	-.44000	-1.7137	.8337

6. Uji Penetapan Kadar

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	1.0159E2	.23643	.13650	101.0027	102.1773	101.32	101.76
	Batch 2	3	1.0129E2	.46130	.26633	100.1441	102.4359	100.77	101.65
	Batch 3	3	1.0083E2	.48042	.27737	99.6366	102.0234	100.45	101.37
	Total	9	1.0124E2	.48454	.16151	100.8642	101.6091	100.45	101.76
Formula 2	Batch 1	3	1.0119E2	.57003	.32911	99.7706	102.6027	100.62	101.76
	Batch 2	3	1.0106E2	.89616	.51740	98.8338	103.2862	100.05	101.76
	Batch 3	3	1.0136E2	.38974	.22502	100.3918	102.3282	100.93	101.69
	Total	9	1.0120E2	.58051	.19350	100.7560	101.6484	100.05	101.76
Formula 3	Batch 1	3	1.0112E2	.36592	.21127	100.2110	102.0290	100.77	101.50
	Batch 2	3	1.0097E2	.61579	.35553	99.4403	102.4997	100.45	101.65
	Batch 3	3	1.0026E2	.36950	.21333	99.3454	101.1812	100.05	100.69
	Total	9	1.0078E2	.56514	.18838	100.3500	101.2188	100.05	101.65
Formula 4	Batch 1	3	1.0060E2	.16042	.09262	100.2048	101.0018	100.45	100.77
	Batch 2	3	1.0107E2	.63311	.36553	99.5006	102.6461	100.59	101.79
	Batch 3	3	1.0075E2	.40796	.23554	99.7332	101.7601	100.37	101.18
	Total	9	1.0081E2	.43791	.14597	100.4712	101.1444	100.37	101.79

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	1.188	2	6	.368
Formula 2	1.418	2	6	.313
Formula 3	.842	2	6	.476
Formula 4	2.831	2	6	.136

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	.879	2	.440	2.640	.150
	Within Groups	.999	6	.167		
	Total	1.878	8			
Formula 2	Between Groups	.136	2	.068	.159	.856
	Within Groups	2.560	6	.427		
	Total	2.696	8			
Formula 3	Between Groups	1.256	2	.628	2.900	.131
	Within Groups	1.299	6	.217		
	Total	2.555	8			
Formula 4	Between Groups	.348	2	.174	.881	.462
	Within Groups	1.186	6	.198		
	Total	1.534	8			

7. Hasil Uji Akurasi dan Presisi Disolusi

Konsentrasi 8%

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Konsentrasi	3	99.8867	1.33945	.77333

One-Sample Test

	Test Value = 100					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Konsentrasi	-.147	2	.897	-.11333	-3.4407	3.2141

Konsentrasi 50%

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Konsentrasi	3	99.6600	.59632	.34429

One-Sample Test

	Test Value = 100					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Konsentrasi	-.988	2	.427	-.34000	-1.8213	1.1413

Konsentrasi 100%

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Konsentrasi	3	1.0009E2	.86008	.49657

One-Sample Test

	Test Value = 100					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Konsentrasi	.188	2	.868	.09333	-2.0432	2.2299

8. Uji Disolusi

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	8	65.4775	11.12237	3.93235	56.1790	74.7760	42.39	73.37
	Batch 2	8	64.5575	11.30501	3.99692	55.1063	74.0087	41.78	72.69
	Batch 3	8	65.9638	11.09444	3.92248	56.6886	75.2389	42.64	73.80
	Total	24	65.3329	10.69404	2.18291	60.8172	69.8486	41.78	73.80
Formula 2	Batch 1	8	63.6288	24.02517	8.49418	43.5432	83.7143	21.36	83.92
	Batch 2	8	63.9588	23.91131	8.45392	43.9684	83.9491	21.67	84.17
	Batch 3	8	63.8075	23.93301	8.46160	43.7990	83.8160	21.30	84.04
	Total	24	63.7983	22.89168	4.67275	54.1320	73.4646	21.30	84.17
Formula 3	Batch 1	8	46.6688	23.52347	8.31680	27.0026	66.3349	10.99	76.89
	Batch 2	8	46.2075	23.67303	8.36968	26.4164	65.9986	10.44	76.64
	Batch 3	8	46.6838	23.17820	8.19473	27.3063	66.0612	11.24	75.84
	Total	24	46.5200	22.41713	4.57588	37.0541	55.9859	10.44	76.89
Formula 4	Batch 1	8	40.0750	20.90553	7.39122	22.5975	57.5525	9.45	71.52
	Batch 2	8	39.4100	20.87605	7.38080	21.9572	56.8628	9.39	70.84
	Batch 3	8	40.2725	21.11869	7.46658	22.6168	57.9282	9.38	72.07
	Total	24	39.9192	20.03824	4.09029	31.4578	48.3806	9.38	72.07

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	.010	2	21	.990
Formula 2	.000	2	21	1.000
Formula 3	.002	2	21	.998
Formula 4	.001	2	21	.999

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	8.161	2	4.081	.033	.968
	Within Groups	2622.178	21	124.866		
	Total	2630.339	23			
Formula 2	Between Groups	.437	2	.218	.000	1.000
	Within Groups	12052.236	21	573.916		
	Total	12052.673	23			
Formula 3	Between Groups	1.173	2	.586	.001	.999
	Within Groups	11556.965	21	550.332		
	Total	11558.138	23			
Formula 4	Between Groups	3.267	2	1.634	.004	.996
	Within Groups	9231.950	21	439.617		
	Total	9235.217	23			

9. $\%ED_{360}$

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	64.8550	.36438	.21037	63.9498	65.7602	64.58	65.27
	Batch 2	3	64.0170	.80857	.46683	62.0084	66.0256	63.16	64.76
	Batch 3	3	65.2586	.47680	.27528	64.0742	66.4430	64.72	65.63
	Total	9	64.7102	.74454	.24818	64.1379	65.2825	63.16	65.63
Formula 2	Batch 1	3	65.8499	.71956	.41544	64.0624	67.6373	65.10	66.53
	Batch 2	3	66.1172	.21497	.12411	65.5832	66.6512	65.87	66.26
	Batch 3	3	65.9681	1.09773	.63377	63.2412	68.6950	65.32	67.24
	Total	9	65.9784	.67506	.22502	65.4595	66.4973	65.10	67.24
Formula 3	Batch 1	3	48.3897	.52091	.30075	47.0957	49.6837	47.82	48.85
	Batch 2	3	47.9578	.80628	.46551	45.9549	49.9608	47.14	48.75
	Batch 3	3	48.4206	.49558	.28612	47.1895	49.6516	47.90	48.89
	Total	9	48.2560	.58477	.19492	47.8065	48.7055	47.14	48.89
Formula 4	Batch 1	3	41.0221	.36345	.20984	40.1192	41.9250	40.68	41.40
	Batch 2	3	40.4000	.59149	.34150	38.9307	41.8693	39.83	41.01
	Batch 3	3	41.2329	.58349	.33688	39.7834	42.6824	40.63	41.79
	Total	9	40.8850	.58843	.19614	40.4327	41.3373	39.83	41.79

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	1.003	2	6	.421
Formula 2	3.694	2	6	.090
Formula 3	.322	2	6	.736
Formula 4	.308	2	6	.746

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	2.407	2	1.203	3.561	.096
	Within Groups	2.028	6	.338		
	Total	4.435	8			
Formula 2	Between Groups	.108	2	.054	.091	.914
	Within Groups	3.538	6	.590		
	Total	3.646	8			
Formula 3	Between Groups	.402	2	.201	.516	.621
	Within Groups	2.334	6	.389		
	Total	2.736	8			
Formula 4	Between Groups	1.125	2	.563	2.052	.209
	Within Groups	1.645	6	.274		
	Total	2.770	8			

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Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	2.65233	.106810	.061667	2.38700	2.91766	2.529	2.714
	Batch 2	3	2.54033	.124829	.072070	2.23024	2.85043	2.400	2.639
	Batch 3	3	2.70200	.147976	.085434	2.33441	3.06959	2.591	2.870
	Total	9	2.63156	.131777	.043926	2.53026	2.73285	2.400	2.870
Formula 2	Batch 1	3	1.96133	.009074	.005239	1.93879	1.98387	1.953	1.971
	Batch 2	3	1.95733	.006658	.003844	1.94079	1.97387	1.953	1.965
	Batch 3	3	1.96033	.012741	.007356	1.92868	1.99198	1.952	1.975
	Total	9	1.95967	.008689	.002896	1.95299	1.96635	1.952	1.975
Formula 3	Batch 1	3	.90267	.115049	.066424	.61687	1.18846	.770	.975
	Batch 2	3	.97867	.009713	.005608	.95454	1.00279	.968	.987
	Batch 3	3	.95467	.003512	.002028	.94594	.96339	.951	.958
	Total	9	.94533	.066841	.022280	.89395	.99671	.770	.987
Formula 4	Batch 1	3	.87167	.005508	.003180	.85799	.88535	.868	.878
	Batch 2	3	.87033	.012342	.007126	.83967	.90099	.860	.884
	Batch 3	3	.87900	.011000	.006351	.85167	.90633	.868	.890
	Total	9	.87367	.009605	.003202	.86628	.88105	.860	.890

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	.299	2	6	.752
Formula 2	1.179	2	6	.370
Formula 3	13.807	2	6	.006
Formula 4	.768	2	6	.505

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	.041	2	.021	1.262	.349
	Within Groups	.098	6	.016		
	Total	.139	8			
Formula 2	Between Groups	.000	2	.000	.135	.876
	Within Groups	.001	6	.000		
	Total	.001	8			
Formula 3	Between Groups	.009	2	.005	1.018	.416
	Within Groups	.027	6	.004		
	Total	.036	8			
Formula 4	Between Groups	.000	2	.000	.645	.557
	Within Groups	.001	6	.000		
	Total	.001	8			

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Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	.02333	.001155	.000667	.02046	.02620	.022	.024
	Batch 2	3	.02200	.001000	.000577	.01952	.02448	.021	.023
	Batch 3	3	.02433	.001155	.000667	.02146	.02720	.023	.025
	Total	9	.02322	.001394	.000465	.02215	.02429	.021	.025
Formula 2	Batch 1	3	.02400	.003606	.002082	.01504	.03296	.020	.027
	Batch 2	3	.02833	.004726	.002728	.01659	.04007	.023	.032
	Batch 3	3	.02533	.001528	.000882	.02154	.02913	.024	.027
	Total	9	.02589	.003621	.001207	.02311	.02867	.020	.032
Formula 3	Batch 1	3	.00900	.000000	.000000	.00900	.00900	.009	.009
	Batch 2	3	.00900	.000000	.000000	.00900	.00900	.009	.009
	Batch 3	3	.01000	.001000	.000577	.00752	.01248	.009	.011
	Total	9	.00933	.000707	.000236	.00879	.00988	.009	.011
Formula 4	Batch 1	3	.00600	.000000	.000000	.00600	.00600	.006	.006
	Batch 2	3	.00633	.000577	.000333	.00490	.00777	.006	.007
	Batch 3	3	.00633	.000577	.000333	.00490	.00777	.006	.007
	Total	9	.00622	.000441	.000147	.00588	.00656	.006	.007

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	.235	2	6	.797
Formula 2	2.228	2	6	.189
Formula 3	4.000	2	6	.079
Formula 4	8.000	2	6	.020

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	.000	2	.000	3.364	.105
	Within Groups	.000	6	.000		
	Total	.000	8			
Formula 2	Between Groups	.000	2	.000	1.177	.370
	Within Groups	.000	6	.000		
	Total	.000	8			
Formula 3	Between Groups	.000	2	.000	3.000	.125
	Within Groups	.000	6	.000		
	Total	.000	8			
Formula 4	Between Groups	.000	2	.000	.500	.630
	Within Groups	.000	6	.000		
	Total	.000	8			

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Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Formula 1	Batch 1	3	3.50567E1	1.408735	.813333	31.55718	38.55616	33.430	35.870
	Batch 2	3	3.29800E1	1.180000	.681273	30.04872	35.91128	31.800	34.160
	Batch 3	3	3.46500E1	1.468571	.847880	31.00187	38.29813	33.430	36.280
	Total	9	3.42289E1	1.513856	.504619	33.06524	35.39254	31.800	36.280
Formula 2	Batch 1	3	3.76300E1	.185203	.106927	37.16993	38.09007	37.440	37.810
	Batch 2	3	3.73100E1	.242693	.140119	36.70712	37.91288	37.030	37.460
	Batch 3	3	3.76500E1	.329090	.190000	36.83250	38.46750	37.460	38.030
	Total	9	3.75300E1	.278702	.092901	37.31577	37.74423	37.030	38.030
Formula 3	Batch 1	3	2.46567E1	.208407	.120324	24.13896	25.17438	24.430	24.840
	Batch 2	3	2.44967E1	.395137	.228133	23.51509	25.47824	24.070	24.850
	Batch 3	3	2.42933E1	.041633	.024037	24.18991	24.39676	24.260	24.340
	Total	9	2.44822E1	.274216	.091405	24.27144	24.69300	24.070	24.850
Formula 4	Batch 1	3	2.17833E1	.162891	.094045	21.37869	22.18798	21.670	21.970
	Batch 2	3	2.17200E1	.284781	.164418	21.01257	22.42743	21.470	22.030
	Batch 3	3	2.19467E1	.282902	.163333	21.24390	22.64943	21.690	22.250
	Total	9	2.18167E1	.239113	.079704	21.63287	22.00047	21.470	22.250

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Formula 1	.250	2	6	.786
Formula 2	1.250	2	6	.352
Formula 3	3.268	2	6	.110
Formula 4	.493	2	6	.633

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Formula 1	Between Groups	7.267	2	3.633	1.970	.220
	Within Groups	11.067	6	1.845		
	Total	18.334	8			
Formula 2	Between Groups	.218	2	.109	1.626	.273
	Within Groups	.403	6	.067		
	Total	.621	8			
Formula 3	Between Groups	.199	2	.099	1.483	.300
	Within Groups	.403	6	.067		
	Total	.602	8			
Formula 4	Between Groups	.082	2	.041	.656	.553
	Within Groups	.375	6	.063		
	Total	.457	8			

LAMPIRAN K

HASIL UJI STATISTIK ANTAR FORMULA

1. Uji Keseragaman Bobot

Descriptives

Bobot

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	20	6.9918E2	2.09583	.46864	698.1941	700.1559	693.80	702.90
Formula II	20	6.9850E2	2.16806	.48479	697.4903	699.5197	694.50	702.80
Formula III	20	6.9861E2	2.26365	.50617	697.5506	699.6694	693.20	702.30
Formula IV	20	6.9871E2	1.75466	.39235	697.8888	699.5312	695.40	702.00
Formula I_2	20	6.9937E2	2.21005	.49418	698.3357	700.4043	695.60	702.80
Formula II_2	20	6.9906E2	1.63559	.36573	698.2945	699.8255	696.20	702.00
Formula III_2	20	6.9878E2	2.26915	.50740	697.7180	699.8420	695.20	703.00
Formula IV_2	20	6.9871E2	1.54133	.34465	697.9886	699.4314	696.20	700.90
Formula I_3	20	6.9929E2	1.43544	.32098	698.6232	699.9668	696.70	701.30
Formula II_3	20	6.9879E2	1.31385	.29379	698.1751	699.4049	696.20	701.50
Formula III_3	20	6.9906E2	1.97737	.44215	698.1296	699.9804	695.60	702.80
Formula IV_3	20	6.9890E2	1.61261	.36059	698.1403	699.6497	696.30	701.50
Total	240	6.9891E2	1.86091	.12012	698.6763	699.1495	693.20	703.00

Test of Homogeneity of Variances

Bobot

Levene Statistic	df1	df2	Sig.
1.208	11	228	.282

ANOVA

Bobot

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.780	11	1.525	.429	.942
Within Groups	810.870	228	3.556		
Total	827.650	239			

2. Uji Keseragaman Ukuran

Descriptives

Ukuran

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	20	.44833	.000765	.000171	.44798	.44869	.447	.450
Formula II	20	.44892	.000816	.000182	.44853	.44930	.448	.450
Formula III	20	.44825	.001574	.000352	.44751	.44899	.445	.450
Formula IV	20	.44867	.001160	.000259	.44812	.44921	.445	.450
Formula I_2	20	.44875	.000917	.000205	.44832	.44918	.447	.450
Formula II_2	20	.44842	.000373	.000083	.44824	.44859	.448	.450
Formula III_2	20	.44858	.000611	.000137	.44830	.44887	.448	.450
Formula IV_2	20	.44883	.000784	.000175	.44847	.44920	.448	.450
Formula I_3	20	.44825	.001265	.000283	.44766	.44884	.445	.450
Formula II_3	20	.44875	.000740	.000166	.44840	.44910	.448	.450
Formula III_3	20	.44867	.001026	.000229	.44819	.44915	.447	.450
Formula IV_3	20	.44867	.000684	.000153	.44835	.44899	.448	.450
Total	240	.44859	.000948	.000061	.44847	.44871	.445	.450

Test of Homogeneity of Variances

Ukuran

Levene Statistic	df1	df2	Sig.
2.430	11	228	.007

ANOVA

Ukuran

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	11	.000	1.145	.327
Within Groups	.000	228	.000		
Total	.000	239			

3. Uji Kekerasan Tablet

Descriptives

Kekerasan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	10	12.2600	.26331	.08327	12.0716	12.4484	11.90	12.70
Formula II	10	13.5500	.20138	.06368	13.4059	13.6941	13.20	13.90
Formula III	10	15.9900	.36652	.11590	15.7278	16.2522	15.50	16.70
Formula IV	10	17.9400	.18974	.06000	17.8043	18.0757	17.80	18.40
Formula I_2	10	12.5300	.62370	.19723	12.0838	12.9762	11.60	13.90
Formula II_2	10	13.5800	.25298	.08000	13.3990	13.7610	13.20	13.90
Formula III_2	10	15.9000	.28674	.09068	15.6949	16.1051	15.40	16.40
Formula IV_2	10	17.9300	.18288	.05783	17.7992	18.0608	17.60	18.20
Formula I_3	10	12.6000	.35277	.11155	12.3476	12.8524	11.90	13.10
Formula II_3	10	13.7500	.32059	.10138	13.5207	13.9793	13.30	14.20
Formula III_3	10	16.0000	.31972	.10111	15.7713	16.2287	15.50	16.60
Formula IV_3	10	17.6900	.29609	.09363	17.4782	17.9018	17.20	18.00
Total	120	14.9767	2.11909	.19345	14.5936	15.3597	11.60	18.40

Test of Homogeneity of Variances

Kekerasan

Levene Statistic	df1	df2	Sig.
1.742	11	108	.074

ANOVA

Kekerasan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	522.981	11	47.544	450.651	.000
Within Groups	11.394	108	.106		
Total	534.375	119			

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
Formula I	Formula II	-1.29000*	.14526	.000	-1.7753	-.8047
	Formula III	-3.73000*	.14526	.000	-4.2153	-3.2447
	Formula IV	-5.68000*	.14526	.000	-6.1653	-5.1947
	Formula I_2	-.27000	.14526	.781	-.7553	.2153
	Formula II_2	-1.32000*	.14526	.000	-1.8053	-.8347
	Formula III_2	-3.64000*	.14526	.000	-4.1253	-3.1547
	Formula IV_2	-5.67000*	.14526	.000	-6.1553	-5.1847
	Formula I_3	-.34000	.14526	.455	-.8253	.1453
	Formula II_3	-1.49000*	.14526	.000	-1.9753	-1.0047
	Formula III_3	-3.74000*	.14526	.000	-4.2253	-3.2547
	Formula IV_3	-5.43000*	.14526	.000	-5.9153	-4.9447
Formula II	Formula I	1.29000*	.14526	.000	.8047	1.7753
	Formula III	-2.44000*	.14526	.000	-2.9253	-1.9547
	Formula IV	-4.39000*	.14526	.000	-4.8753	-3.9047
	Formula I_2	1.02000*	.14526	.000	.5347	1.5053
	Formula II_2	-.03000	.14526	1.000	-.5153	.4553
	Formula III_2	-2.35000*	.14526	.000	-2.8353	-1.8647
	Formula IV_2	-4.38000*	.14526	.000	-4.8653	-3.8947
	Formula I_3	.95000*	.14526	.000	.4647	1.4353
	Formula II_3	-.20000	.14526	.966	-.6853	.2853
	Formula III_3	-2.45000*	.14526	.000	-2.9353	-1.9647
	Formula IV_3	-4.14000*	.14526	.000	-4.6253	-3.6547
Formula III	Formula I	3.73000*	.14526	.000	3.2447	4.2153
	Formula II	2.44000*	.14526	.000	1.9547	2.9253
	Formula IV	-1.95000*	.14526	.000	-2.4353	-1.4647
	Formula I_2	3.46000*	.14526	.000	2.9747	3.9453
	Formula II_2	2.41000*	.14526	.000	1.9247	2.8953
	Formula III_2	.09000	.14526	1.000	-.3953	.5753
	Formula IV_2	-1.94000*	.14526	.000	-2.4253	-1.4547
	Formula I_3	3.39000*	.14526	.000	2.9047	3.8753

	Formula II_3	2.24000*	.14526	.000	1.7547	2.7253
	Formula III_3	-.01000	.14526	1.000	-.4953	.4753
	Formula IV_3	-1.70000*	.14526	.000	-2.1853	-1.2147
Formula IV	Formula I	5.68000*	.14526	.000	5.1947	6.1653
	Formula II	4.39000*	.14526	.000	3.9047	4.8753
	Formula III	1.95000*	.14526	.000	1.4647	2.4353
	Formula I_2	5.41000*	.14526	.000	4.9247	5.8953
	Formula II_2	4.36000*	.14526	.000	3.8747	4.8453
	Formula III_2	2.04000*	.14526	.000	1.5547	2.5253
	Formula IV_2	.01000	.14526	1.000	-.4753	.4953
	Formula I_3	5.34000*	.14526	.000	4.8547	5.8253
	Formula II_3	4.19000*	.14526	.000	3.7047	4.6753
	Formula III_3	1.94000*	.14526	.000	1.4547	2.4253
	Formula IV_3	.25000	.14526	.855	-.2353	.7353
Formula I_2	Formula I	.27000	.14526	.781	-.2153	.7553
	Formula II	-1.02000*	.14526	.000	-1.5053	-.5347
	Formula III	-3.46000*	.14526	.000	-3.9453	-2.9747
	Formula IV	-5.41000*	.14526	.000	-5.8953	-4.9247
	Formula II_2	-1.05000*	.14526	.000	-1.5353	-.5647
	Formula III_2	-3.37000*	.14526	.000	-3.8553	-2.8847
	Formula IV_2	-5.40000*	.14526	.000	-5.8853	-4.9147
	Formula I_3	-.07000	.14526	1.000	-.5553	.4153
	Formula II_3	-1.22000*	.14526	.000	-1.7053	-.7347
	Formula III_3	-3.47000*	.14526	.000	-3.9553	-2.9847
	Formula IV_3	-5.16000*	.14526	.000	-5.6453	-4.6747
Formula II_2	Formula I	1.32000*	.14526	.000	.8347	1.8053
	Formula II	.03000	.14526	1.000	-.4553	.5153
	Formula III	-2.41000*	.14526	.000	-2.8953	-1.9247
	Formula IV	-4.36000*	.14526	.000	-4.8453	-3.8747
	Formula I_2	1.05000*	.14526	.000	.5647	1.5353
	Formula III_2	-2.32000*	.14526	.000	-2.8053	-1.8347
	Formula IV_2	-4.35000*	.14526	.000	-4.8353	-3.8647
	Formula I_3	.98000*	.14526	.000	.4947	1.4653
	Formula II_3	-.17000	.14526	.990	-.6553	.3153
	Formula III_3	-2.42000*	.14526	.000	-2.9053	-1.9347
	Formula IV_3	-4.11000*	.14526	.000	-4.5953	-3.6247

	Formula I	3.64000*	.14526	.000	3.1547	4.1253
	Formula II	2.35000*	.14526	.000	1.8647	2.8353
	Formula III	-.09000	.14526	1.000	-.5753	.3953
	Formula IV	-2.04000*	.14526	.000	-2.5253	-1.5547
	Formula I_2	3.37000*	.14526	.000	2.8847	3.8553
Formula III_2	Formula II_2	2.32000*	.14526	.000	1.8347	2.8053
	Formula IV_2	-2.03000*	.14526	.000	-2.5153	-1.5447
	Formula I_3	3.30000*	.14526	.000	2.8147	3.7853
	Formula II_3	2.15000*	.14526	.000	1.6647	2.6353
	Formula III_3	-.10000	.14526	1.000	-.5853	.3853
	Formula IV_3	-1.79000*	.14526	.000	-2.2753	-1.3047
	Formula I	5.67000*	.14526	.000	5.1847	6.1553
	Formula II	4.38000*	.14526	.000	3.8947	4.8653
	Formula III	1.94000*	.14526	.000	1.4547	2.4253
	Formula IV	-.01000	.14526	1.000	-.4953	.4753
	Formula I_2	5.40000*	.14526	.000	4.9147	5.8853
Formula IV_2	Formula II_2	4.35000*	.14526	.000	3.8647	4.8353
	Formula III_2	2.03000*	.14526	.000	1.5447	2.5153
	Formula I_3	5.33000*	.14526	.000	4.8447	5.8153
	Formula II_3	4.18000*	.14526	.000	3.6947	4.6653
	Formula III_3	1.93000*	.14526	.000	1.4447	2.4153
	Formula IV_3	.24000	.14526	.885	-.2453	.7253
	Formula I	.34000	.14526	.455	-.1453	.8253
	Formula II	-.95000*	.14526	.000	-1.4353	-.4647
	Formula III	-3.39000*	.14526	.000	-3.8753	-2.9047
	Formula IV	-5.34000*	.14526	.000	-5.8253	-4.8547
	Formula I_2	.07000	.14526	1.000	-.4153	.5553
Formula I_3	Formula II_2	-.98000*	.14526	.000	-1.4653	-.4947
	Formula III_2	-3.30000*	.14526	.000	-3.7853	-2.8147
	Formula IV_2	-5.33000*	.14526	.000	-5.8153	-4.8447
	Formula II_3	-1.15000*	.14526	.000	-1.6353	-.6647
	Formula III_3	-3.40000*	.14526	.000	-3.8853	-2.9147
	Formula IV_3	-5.09000*	.14526	.000	-5.5753	-4.6047
	Formula I	1.49000*	.14526	.000	1.0047	1.9753
Formula II_3	Formula II	.20000	.14526	.966	-.2853	.6853
	Formula III	-2.24000*	.14526	.000	-2.7253	-1.7547

	Formula IV	-4.19000*	.14526	.000	-4.6753	-3.7047
	Formula I_2	1.22000*	.14526	.000	.7347	1.7053
	Formula II_2	.17000	.14526	.990	-.3153	.6553
	Formula III_2	-2.15000*	.14526	.000	-2.6353	-1.6647
	Formula IV_2	-4.18000*	.14526	.000	-4.6653	-3.6947
	Formula I_3	1.15000*	.14526	.000	.6647	1.6353
	Formula III_3	-2.25000*	.14526	.000	-2.7353	-1.7647
	Formula IV_3	-3.94000*	.14526	.000	-4.4253	-3.4547
Formula III_3	Formula I	3.74000*	.14526	.000	3.2547	4.2253
	Formula II	2.45000*	.14526	.000	1.9647	2.9353
	Formula III	.01000	.14526	1.000	-.4753	.4953
	Formula IV	-1.94000*	.14526	.000	-2.4253	-1.4547
	Formula I_2	3.47000*	.14526	.000	2.9847	3.9553
	Formula II_2	2.42000*	.14526	.000	1.9347	2.9053
	Formula III_2	.10000	.14526	1.000	-.3853	.5853
	Formula IV_2	-1.93000*	.14526	.000	-2.4153	-1.4447
	Formula I_3	3.40000*	.14526	.000	2.9147	3.8853
	Formula II_3	2.25000*	.14526	.000	1.7647	2.7353
	Formula IV_3	-1.69000*	.14526	.000	-2.1753	-1.2047
Formula IV_3	Formula I	5.43000*	.14526	.000	4.9447	5.9153
	Formula II	4.14000*	.14526	.000	3.6547	4.6253
	Formula III	1.70000*	.14526	.000	1.2147	2.1853
	Formula IV	-.25000	.14526	.855	-.7353	.2353
	Formula I_2	5.16000*	.14526	.000	4.6747	5.6453
	Formula II_2	4.11000*	.14526	.000	3.6247	4.5953
	Formula III_2	1.79000*	.14526	.000	1.3047	2.2753
	Formula IV_2	-.24000	.14526	.885	-.7253	.2453
	Formula I_3	5.09000*	.14526	.000	4.6047	5.5753
	Formula II_3	3.94000*	.14526	.000	3.4547	4.4253
	Formula III_3	1.69000*	.14526	.000	1.2047	2.1753

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

Homogeneous Subsets

Kekerasan

Tukey HSD

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
Formula I	10	12.2600			
Formula I_2	10	12.5300			
Formula I_3	10	12.6000			
Formula II	10		13.5500		
Formula II_2	10		13.5800		
Formula II_3	10		13.7500		
Formula III_2	10			15.9000	
Formula III	10			15.9900	
Formula III_3	10			16.0000	
Formula IV_3	10				17.6900
Formula IV_2	10				17.9300
Formula IV	10				17.9400
Sig.		.455	.966	1.000	.855

Means for groups in homogeneous subsets are displayed.

4. Uji Kerapuhan Tablet

Descriptives

Kerapuhan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	.6733	.04041	.02333	.5729	.7737	.65	.72
Formula II	3	.4767	.04041	.02333	.3763	.5771	.43	.50
Formula III	3	.3367	.04041	.02333	.2363	.4371	.29	.36
Formula IV	3	.1867	.04041	.02333	.0863	.2871	.14	.21
Formula I_2	3	.6633	.04041	.02333	.5629	.7637	.64	.71
Formula II_2	3	.4933	.00577	.00333	.4790	.5077	.49	.50
Formula III_2	3	.3333	.04619	.02667	.2186	.4481	.28	.36
Formula IV_2	3	.1633	.04041	.02333	.0629	.2637	.14	.21
Formula I_3	3	.6367	.00577	.00333	.6223	.6510	.63	.64
Formula II_3	3	.4767	.02309	.01333	.4193	.5340	.45	.49
Formula III_3	3	.3367	.04041	.02333	.2363	.4371	.29	.36
Formula IV_3	3	.1900	.04359	.02517	.0817	.2983	.14	.22
Total	36	.4139	.18213	.03036	.3523	.4755	.14	.72

Test of Homogeneity of Variances

Kerapuhan

Levene Statistic	df1	df2	Sig.
2.399	11	24	.035

ANOVA

Kerapuhan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.129	11	.103	76.653	.000
Within Groups	.032	24	.001		
Total	1.161	35			

Post Hoc Tests

Multiple Comparisons

Kerapuhan
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula I	Formula II	.19667*	.02988	.000	.0889	.3044
	Formula III	.33667*	.02988	.000	.2289	.4444
	Formula IV	.48667*	.02988	.000	.3789	.5944
	Formula I_2	.01000	.02988	1.000	-.0977	.1177
	Formula II_2	.18000*	.02988	.000	.0723	.2877
	Formula III_2	.34000*	.02988	.000	.2323	.4477
	Formula IV_2	.51000*	.02988	.000	.4023	.6177
	Formula I_3	.03667	.02988	.981	-.0711	.1444
	Formula II_3	.19667*	.02988	.000	.0889	.3044
	Formula III_3	.33667*	.02988	.000	.2289	.4444
	Formula IV_3	.48333*	.02988	.000	.3756	.5911
Formula II	Formula I	-.19667*	.02988	.000	-.3044	-.0889
	Formula III	.14000*	.02988	.004	.0323	.2477
	Formula IV	.29000*	.02988	.000	.1823	.3977
	Formula I_2	-.18667*	.02988	.000	-.2944	-.0789
	Formula II_2	-.01667	.02988	1.000	-.1244	.0911
	Formula III_2	.14333*	.02988	.003	.0356	.2511
	Formula IV_2	.31333*	.02988	.000	.2056	.4211
	Formula I_3	-.16000*	.02988	.001	-.2677	-.0523
	Formula II_3	.00000	.02988	1.000	-.1077	.1077
	Formula III_3	.14000*	.02988	.004	.0323	.2477
	Formula IV_3	.28667*	.02988	.000	.1789	.3944
Formula III	Formula I	-.33667*	.02988	.000	-.4444	-.2289
	Formula II	-.14000*	.02988	.004	-.2477	-.0323
	Formula IV	.15000*	.02988	.002	.0423	.2577
	Formula I_2	-.32667*	.02988	.000	-.4344	-.2189
	Formula II_2	-.15667*	.02988	.001	-.2644	-.0489
	Formula III_2	.00333	.02988	1.000	-.1044	.1111
	Formula IV_2	.17333*	.02988	.000	.0656	.2811

	Formula I_3	-.30000*	.02988	.000	-.4077	-.1923
	Formula II_3	-.14000*	.02988	.004	-.2477	-.0323
	Formula III_3	.00000	.02988	1.000	-.1077	.1077
	Formula IV_3	.14667*	.02988	.002	.0389	.2544
Formula IV	Formula I	-.48667*	.02988	.000	-.5944	-.3789
	Formula II	-.29000*	.02988	.000	-.3977	-.1823
	Formula III	-.15000*	.02988	.002	-.2577	-.0423
	Formula I_2	-.47667*	.02988	.000	-.5844	-.3689
	Formula II_2	-.30667*	.02988	.000	-.4144	-.1989
	Formula III_2	-.14667*	.02988	.002	-.2544	-.0389
	Formula IV_2	.02333	.02988	1.000	-.0844	.1311
	Formula I_3	-.45000*	.02988	.000	-.5577	-.3423
	Formula II_3	-.29000*	.02988	.000	-.3977	-.1823
	Formula III_3	-.15000*	.02988	.002	-.2577	-.0423
	Formula IV_3	-.00333	.02988	1.000	-.1111	.1044
Formula I_2	Formula I	-.01000	.02988	1.000	-.1177	.0977
	Formula II	.18667*	.02988	.000	.0789	.2944
	Formula III	.32667*	.02988	.000	.2189	.4344
	Formula IV	.47667*	.02988	.000	.3689	.5844
	Formula II_2	.17000*	.02988	.000	.0623	.2777
	Formula III_2	.33000*	.02988	.000	.2223	.4377
	Formula IV_2	.50000*	.02988	.000	.3923	.6077
	Formula I_3	.02667	.02988	.999	-.0811	.1344
	Formula II_3	.18667*	.02988	.000	.0789	.2944
	Formula III_3	.32667*	.02988	.000	.2189	.4344
	Formula IV_3	.47333*	.02988	.000	.3656	.5811
Formula II_2	Formula I	-.18000*	.02988	.000	-.2877	-.0723
	Formula II	.01667	.02988	1.000	-.0911	.1244
	Formula III	.15667*	.02988	.001	.0489	.2644
	Formula IV	.30667*	.02988	.000	.1989	.4144
	Formula I_2	-.17000*	.02988	.000	-.2777	-.0623
	Formula III_2	.16000*	.02988	.001	.0523	.2677
	Formula IV_2	.33000*	.02988	.000	.2223	.4377
	Formula I_3	-.14333*	.02988	.003	-.2511	-.0356
	Formula II_3	.01667	.02988	1.000	-.0911	.1244
	Formula III_3	.15667*	.02988	.001	.0489	.2644

	Formula IV_3	.30333*	.02988	.000	.1956	.4111
Formula III_2	Formula I	-.34000*	.02988	.000	-.4477	-.2323
	Formula II	-.14333*	.02988	.003	-.2511	-.0356
	Formula III	-.00333	.02988	1.000	-.1111	.1044
	Formula IV	.14667*	.02988	.002	.0389	.2544
	Formula I_2	-.33000*	.02988	.000	-.4377	-.2223
	Formula II_2	-.16000*	.02988	.001	-.2677	-.0523
	Formula IV_2	.17000*	.02988	.000	.0623	.2777
	Formula I_3	-.30333*	.02988	.000	-.4111	-.1956
	Formula II_3	-.14333*	.02988	.003	-.2511	-.0356
	Formula III_3	-.00333	.02988	1.000	-.1111	.1044
	Formula IV_3	.14333*	.02988	.003	.0356	.2511
Formula IV_2	Formula I	-.51000*	.02988	.000	-.6177	-.4023
	Formula II	-.31333*	.02988	.000	-.4211	-.2056
	Formula III	-.17333*	.02988	.000	-.2811	-.0656
	Formula IV	-.02333	.02988	1.000	-.1311	.0844
	Formula I_2	-.50000*	.02988	.000	-.6077	-.3923
	Formula II_2	-.33000*	.02988	.000	-.4377	-.2223
	Formula III_2	-.17000*	.02988	.000	-.2777	-.0623
	Formula I_3	-.47333*	.02988	.000	-.5811	-.3656
	Formula II_3	-.31333*	.02988	.000	-.4211	-.2056
	Formula III_3	-.17333*	.02988	.000	-.2811	-.0656
	Formula IV_3	-.02667	.02988	.999	-.1344	.0811
Formula I_3	Formula I	-.03667	.02988	.981	-.1444	.0711
	Formula II	.16000*	.02988	.001	.0523	.2677
	Formula III	.30000*	.02988	.000	.1923	.4077
	Formula IV	.45000*	.02988	.000	.3423	.5577
	Formula I_2	-.02667	.02988	.999	-.1344	.0811
	Formula II_2	.14333*	.02988	.003	.0356	.2511
	Formula III_2	.30333*	.02988	.000	.1956	.4111
	Formula IV_2	.47333*	.02988	.000	.3656	.5811
	Formula II_3	.16000*	.02988	.001	.0523	.2677
	Formula III_3	.30000*	.02988	.000	.1923	.4077
	Formula IV_3	.44667*	.02988	.000	.3389	.5544
Formula II_3	Formula I	-.19667*	.02988	.000	-.3044	-.0889
	Formula II	.00000	.02988	1.000	-.1077	.1077

	Formula III	.14000*	.02988	.004	.0323	.2477
	Formula IV	.29000*	.02988	.000	.1823	.3977
	Formula I_2	-.18667*	.02988	.000	-.2944	-.0789
	Formula II_2	-.01667	.02988	1.000	-.1244	.0911
	Formula III_2	.14333*	.02988	.003	.0356	.2511
	Formula IV_2	.31333*	.02988	.000	.2056	.4211
	Formula I_3	-.16000*	.02988	.001	-.2677	-.0523
	Formula III_3	.14000*	.02988	.004	.0323	.2477
	Formula IV_3	.28667*	.02988	.000	.1789	.3944
Formula III_3	Formula I	-.33667*	.02988	.000	-.4444	-.2289
	Formula II	-.14000*	.02988	.004	-.2477	-.0323
	Formula III	.00000	.02988	1.000	-.1077	.1077
	Formula IV	.15000*	.02988	.002	.0423	.2577
	Formula I_2	-.32667*	.02988	.000	-.4344	-.2189
	Formula II_2	-.15667*	.02988	.001	-.2644	-.0489
	Formula III_2	.00333	.02988	1.000	-.1044	.1111
	Formula IV_2	.17333*	.02988	.000	.0656	.2811
	Formula I_3	-.30000*	.02988	.000	-.4077	-.1923
	Formula II_3	-.14000*	.02988	.004	-.2477	-.0323
	Formula IV_3	.14667*	.02988	.002	.0389	.2544
Formula IV_3	Formula I	-.48333*	.02988	.000	-.5911	-.3756
	Formula II	-.28667*	.02988	.000	-.3944	-.1789
	Formula III	-.14667*	.02988	.002	-.2544	-.0389
	Formula IV	.00333	.02988	1.000	-.1044	.1111
	Formula I_2	-.47333*	.02988	.000	-.5811	-.3656
	Formula II_2	-.30333*	.02988	.000	-.4111	-.1956
	Formula III_2	-.14333*	.02988	.003	-.2511	-.0356
	Formula IV_2	.02667	.02988	.999	-.0811	.1344
	Formula I_3	-.44667*	.02988	.000	-.5544	-.3389
	Formula II_3	-.28667*	.02988	.000	-.3944	-.1789
	Formula III_3	-.14667*	.02988	.002	-.2544	-.0389

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

Homogeneous Subsets

Kerapuhan

Tukey HSD

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
Formula IV_2	3	.1633			
Formula IV	3	.1867			
Formula IV_3	3	.1900			
Formula III_2	3		.3333		
Formula III	3		.3367		
Formula III_3	3		.3367		
Formula II	3			.4767	
Formula II_3	3			.4767	
Formula II_2	3			.4933	
Formula I_3	3				.6367
Formula I_2	3				.6633
Formula I	3				.6733
Sig.		.999	1.000	1.000	.981

Means for groups in homogeneous subsets are displayed.

5. Uji Penetapan Kadar

Descriptives

Kadar_obat

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	1.0159E2	.23643	.13650	101.0027	102.1773	101.32	101.76
Formula II	3	1.0119E2	.57003	.32911	99.7706	102.6027	100.62	101.76
Formula III	3	1.0112E2	.36592	.21127	100.2110	102.0290	100.77	101.50
Formula IV	3	1.0060E2	.16042	.09262	100.2048	101.0018	100.45	100.77
Formula I_2	3	1.0129E2	.46130	.26633	100.1441	102.4359	100.77	101.65
Formula II_2	3	1.0106E2	.89616	.51740	98.8338	103.2862	100.05	101.76
Formula III_2	3	1.0097E2	.61579	.35553	99.4403	102.4997	100.45	101.65
Formula IV_2	3	1.0108E2	.65010	.37534	99.4684	102.6983	100.59	101.82
Formula I_3	3	1.0083E2	.48042	.27737	99.6366	102.0234	100.45	101.37
Formula II_3	3	1.0136E2	.38974	.22502	100.3918	102.3282	100.93	101.69
Formula III_3	3	1.0026E2	.36950	.21333	99.3454	101.1812	100.05	100.69
Formula IV_3	3	1.0075E2	.40796	.23554	99.7332	101.7601	100.37	101.18
Total	36	1.0101E2	.54332	.09055	100.8248	101.1924	100.05	101.82

Test of Homogeneity of Variances

Kadar_obat

Levene Statistic	df1	df2	Sig.
1.403	11	24	.234

ANOVA

Kadar_obat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.244	11	.386	1.521	.188
Within Groups	6.088	24	.254		
Total	10.332	35			

6. Uji Disolusi

Descriptives

Pelepasan_obat

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	8	64.4988	10.98344	3.88323	55.3164	73.6811	41.73	72.46
Formula II	8	62.9112	23.77328	8.40512	43.0363	82.7862	21.11	83.18
Formula III	8	46.1525	23.26232	8.22447	26.7047	65.6003	10.87	76.03
Formula IV	8	39.8275	20.79498	7.35213	22.4425	57.2125	9.33	71.09
Formula I_2	8	63.7412	11.16325	3.94680	54.4085	73.0740	41.25	71.77
Formula II_2	8	63.2950	23.66113	8.36547	43.5138	83.0762	21.44	83.29
Formula III_2	8	45.7675	23.44779	8.29005	26.1647	65.3703	10.34	75.91
Formula IV_2	8	38.9912	20.65186	7.30154	21.7259	56.2566	9.29	70.08
Formula I_3	8	65.4487	11.01952	3.89599	56.2362	74.6613	42.30	73.38
Formula II_3	8	62.9762	23.63627	8.35668	43.2158	82.7367	21.01	83.10
Formula III_3	8	46.5650	23.11658	8.17295	27.2391	65.8909	11.21	75.64
Formula IV_3	8	39.9788	20.96074	7.41074	22.4551	57.5024	9.32	71.54
Total	96	53.3461	21.97993	2.24332	48.8926	57.7997	9.29	83.29

Test of Homogeneity of Variances

Pelepasan_obat

Levene Statistic	df1	df2	Sig.
1.653	11	84	.099

ANOVA

Pelepasan_obat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11078.353	11	1007.123	2.430	.011
Within Groups	34817.781	84	414.497		
Total	45896.133	95			

Post Hoc Tests

Multiple Comparisons

Pelepasan_obat
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula I	Formula II	1.58750	10.17960	1.000	-32.6361	35.8111
	Formula III	18.34625	10.17960	.812	-15.8773	52.5698
	Formula IV	24.67125	10.17960	.402	-9.5523	58.8948
	Formula I_2	.75750	10.17960	1.000	-33.4661	34.9811
	Formula II_2	1.20375	10.17960	1.000	-33.0198	35.4273
	Formula III_2	18.73125	10.17960	.791	-15.4923	52.9548
	Formula IV_2	25.50750	10.17960	.351	-8.7161	59.7311
	Formula I_3	-.95000	10.17960	1.000	-35.1736	33.2736
	Formula II_3	1.52250	10.17960	1.000	-32.7011	35.7461
	Formula III_3	17.93375	10.17960	.833	-16.2898	52.1573
	Formula IV_3	24.52000	10.17960	.412	-9.7036	58.7436
Formula II	Formula I	-1.58750	10.17960	1.000	-35.8111	32.6361
	Formula III	16.75875	10.17960	.886	-17.4648	50.9823
	Formula IV	23.08375	10.17960	.507	-11.1398	57.3073
	Formula I_2	-.83000	10.17960	1.000	-35.0536	33.3936
	Formula II_2	-.38375	10.17960	1.000	-34.6073	33.8398
	Formula III_2	17.14375	10.17960	.870	-17.0798	51.3673
	Formula IV_2	23.92000	10.17960	.451	-10.3036	58.1436
	Formula I_3	-2.53750	10.17960	1.000	-36.7611	31.6861
	Formula II_3	-.06500	10.17960	1.000	-34.2886	34.1586
	Formula III_3	16.34625	10.17960	.902	-17.8773	50.5698
	Formula IV_3	22.93250	10.17960	.517	-11.2911	57.1561
Formula III	Formula I	-18.34625	10.17960	.812	-52.5698	15.8773
	Formula II	-16.75875	10.17960	.886	-50.9823	17.4648
	Formula IV	6.32500	10.17960	1.000	-27.8986	40.5486
	Formula I_2	-17.58875	10.17960	.850	-51.8123	16.6348
	Formula II_2	-17.14250	10.17960	.870	-51.3661	17.0811
	Formula III_2	.38500	10.17960	1.000	-33.8386	34.6086
	Formula IV_2	7.16125	10.17960	1.000	-27.0623	41.3848
	Formula I_3	-19.29625	10.17960	.758	-53.5198	14.9273
	Formula II_3	-16.82375	10.17960	.884	-51.0473	17.3998
	Formula III_3	-.41250	10.17960	1.000	-34.6361	33.8111
	Formula IV_3	6.17375	10.17960	1.000	-28.0498	40.3973

Formula IV	Formula I	-24.67125	10.17960	.402	-58.8948	9.5523
	Formula II	-23.08375	10.17960	.507	-57.3073	11.1398
	Formula III	-6.32500	10.17960	1.000	-40.5486	27.8986
	Formula I_2	-23.91375	10.17960	.451	-58.1373	10.3098
	Formula II_2	-23.46750	10.17960	.481	-57.6911	10.7561
	Formula III_2	-5.94000	10.17960	1.000	-40.1636	28.2836
	Formula IV_2	.83625	10.17960	1.000	-33.3873	35.0598
	Formula I_3	-25.62125	10.17960	.344	-59.8448	8.6023
	Formula II_3	-23.14875	10.17960	.503	-57.3723	11.0748
	Formula III_3	-6.73750	10.17960	1.000	-40.9611	27.4861
	Formula IV_3	-.15125	10.17960	1.000	-34.3748	34.0723
Formula I_2	Formula I	-.75750	10.17960	1.000	-34.9811	33.4661
	Formula II	.83000	10.17960	1.000	-33.3936	35.0536
	Formula III	17.58875	10.17960	.850	-16.6348	51.8123
	Formula IV	23.91375	10.17960	.451	-10.3098	58.1373
	Formula II_2	.44625	10.17960	1.000	-33.7773	34.6698
	Formula III_2	17.97375	10.17960	.831	-16.2498	52.1973
	Formula IV_2	24.75000	10.17960	.397	-9.4736	58.9736
	Formula I_3	-1.70750	10.17960	1.000	-35.9311	32.5161
	Formula II_3	.76500	10.17960	1.000	-33.4586	34.9886
	Formula III_3	17.17625	10.17960	.869	-17.0473	51.3998
	Formula IV_3	23.76250	10.17960	.461	-10.4611	57.9861
Formula II_2	Formula I	-1.20375	10.17960	1.000	-35.4273	33.0198
	Formula II	.38375	10.17960	1.000	-33.8398	34.6073
	Formula III	17.14250	10.17960	.870	-17.0811	51.3661
	Formula IV	23.46750	10.17960	.481	-10.7561	57.6911
	Formula I_2	-.44625	10.17960	1.000	-34.6698	33.7773
	Formula III_2	17.52750	10.17960	.853	-16.6961	51.7511
	Formula IV_2	24.30375	10.17960	.426	-9.9198	58.5273
	Formula I_3	-2.15375	10.17960	1.000	-36.3773	32.0698
	Formula II_3	.31875	10.17960	1.000	-33.9048	34.5423
	Formula III_3	16.73000	10.17960	.888	-17.4936	50.9536
	Formula IV_3	23.31625	10.17960	.491	-10.9073	57.5398
Formula III_2	Formula I	-18.73125	10.17960	.791	-52.9548	15.4923
	Formula II	-17.14375	10.17960	.870	-51.3673	17.0798
	Formula III	-.38500	10.17960	1.000	-34.6086	33.8386
	Formula IV	5.94000	10.17960	1.000	-28.2836	40.1636
	Formula I_2	-17.97375	10.17960	.831	-52.1973	16.2498
	Formula II_2	-17.52750	10.17960	.853	-51.7511	16.6961

	Formula IV_2	6.77625	10.17960	1.000	-27.4473	40.9998
	Formula I_3	-19.68125	10.17960	.735	-53.9048	14.5423
	Formula II_3	-17.20875	10.17960	.867	-51.4323	17.0148
	Formula III_3	-.79750	10.17960	1.000	-35.0211	33.4261
	Formula IV_3	5.78875	10.17960	1.000	-28.4348	40.0123
	Formula I	-25.50750	10.17960	.351	-59.7311	8.7161
	Formula II	-23.92000	10.17960	.451	-58.1436	10.3036
	Formula III	-7.16125	10.17960	1.000	-41.3848	27.0623
	Formula IV	-.83625	10.17960	1.000	-35.0598	33.3873
	Formula I_2	-24.75000	10.17960	.397	-58.9736	9.4736
Formula IV_2	Formula II_2	-24.30375	10.17960	.426	-58.5273	9.9198
	Formula III_2	-6.77625	10.17960	1.000	-40.9998	27.4473
	Formula I_3	-26.45750	10.17960	.297	-60.6811	7.7661
	Formula II_3	-23.98500	10.17960	.447	-58.2086	10.2386
	Formula III_3	-7.57375	10.17960	1.000	-41.7973	26.6498
	Formula IV_3	-.98750	10.17960	1.000	-35.2111	33.2361
	Formula I	.95000	10.17960	1.000	-33.2736	35.1736
	Formula II	2.53750	10.17960	1.000	-31.6861	36.7611
	Formula III	19.29625	10.17960	.758	-14.9273	53.5198
	Formula IV	25.62125	10.17960	.344	-8.6023	59.8448
	Formula I_2	1.70750	10.17960	1.000	-32.5161	35.9311
Formula I_3	Formula II_2	2.15375	10.17960	1.000	-32.0698	36.3773
	Formula III_2	19.68125	10.17960	.735	-14.5423	53.9048
	Formula IV_2	26.45750	10.17960	.297	-7.7661	60.6811
	Formula II_3	2.47250	10.17960	1.000	-31.7511	36.6961
	Formula III_3	18.88375	10.17960	.783	-15.3398	53.1073
	Formula IV_3	25.47000	10.17960	.353	-8.7536	59.6936
	Formula I	-1.52250	10.17960	1.000	-35.7461	32.7011
	Formula II	.06500	10.17960	1.000	-34.1586	34.2886
	Formula III	16.82375	10.17960	.884	-17.3998	51.0473
	Formula IV	23.14875	10.17960	.503	-11.0748	57.3723
	Formula I_2	-.76500	10.17960	1.000	-34.9886	33.4586
Formula II_3	Formula II_2	-.31875	10.17960	1.000	-34.5423	33.9048
	Formula III_2	17.20875	10.17960	.867	-17.0148	51.4323
	Formula IV_2	23.98500	10.17960	.447	-10.2386	58.2086
	Formula I_3	-2.47250	10.17960	1.000	-36.6961	31.7511
	Formula III_3	16.41125	10.17960	.900	-17.8123	50.6348
	Formula IV_3	22.99750	10.17960	.513	-11.2261	57.2211
Formula III_3	Formula I	-17.93375	10.17960	.833	-52.1573	16.2898

	Formula II	-16.34625	10.17960	.902	-50.5698	17.8773
	Formula III	.41250	10.17960	1.000	-33.8111	34.6361
	Formula IV	6.73750	10.17960	1.000	-27.4861	40.9611
	Formula I_2	-17.17625	10.17960	.869	-51.3998	17.0473
	Formula II_2	-16.73000	10.17960	.888	-50.9536	17.4936
	Formula III_2	.79750	10.17960	1.000	-33.4261	35.0211
	Formula IV_2	7.57375	10.17960	1.000	-26.6498	41.7973
	Formula I_3	-18.88375	10.17960	.783	-53.1073	15.3398
	Formula II_3	-16.41125	10.17960	.900	-50.6348	17.8123
	Formula IV_3	6.58625	10.17960	1.000	-27.6373	40.8098
	Formula I	-24.52000	10.17960	.412	-58.7436	9.7036
	Formula II	-22.93250	10.17960	.517	-57.1561	11.2911
	Formula III	-6.17375	10.17960	1.000	-40.3973	28.0498
	Formula IV	.15125	10.17960	1.000	-34.0723	34.3748
	Formula I_2	-23.76250	10.17960	.461	-57.9861	10.4611
Formula IV_3	Formula II_2	-23.31625	10.17960	.491	-57.5398	10.9073
	Formula III_2	-5.78875	10.17960	1.000	-40.0123	28.4348
	Formula IV_2	.98750	10.17960	1.000	-33.2361	35.2111
	Formula I_3	-25.47000	10.17960	.353	-59.6936	8.7536
	Formula II_3	-22.99750	10.17960	.513	-57.2211	11.2261
	Formula III_3	-6.58625	10.17960	1.000	-40.8098	27.6373

Homogeneous Subsets

Pelepasan_obat

Tukey HSD

Formula	N	Subset for alpha = 0.05
		1
Formula IV_2	8	38.9912
Formula IV	8	39.8275
Formula IV_3	8	39.9788
Formula III_2	8	45.7675
Formula III	8	46.1525
Formula III_3	8	46.5650
Formula II	8	62.9112
Formula II_3	8	62.9762
Formula II_2	8	63.2950
Formula I_2	8	63.7412
Formula I	8	64.4988
Formula I_3	8	65.4487
Sig.		.297

Means for groups in homogeneous subsets are displayed.

7. $\%ED_{360}$

Descriptives

Persen_ED

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	64.8550	.36438	.21037	63.9498	65.7602	64.58	65.27
Formula II	3	65.8499	.71956	.41544	64.0624	67.6373	65.10	66.53
Formula III	3	48.3897	.52091	.30075	47.0957	49.6837	47.82	48.85
Formula IV	3	41.0221	.36345	.20984	40.1192	41.9250	40.68	41.40
Formula I_2	3	64.0170	.80857	.46683	62.0084	66.0256	63.16	64.76
Formula II_2	3	66.1172	.21497	.12411	65.5832	66.6512	65.87	66.26
Formula III_2	3	47.9578	.80628	.46551	45.9549	49.9608	47.14	48.75
Formula IV_2	3	40.4000	.59149	.34150	38.9307	41.8693	39.83	41.01
Formula I_3	3	65.2586	.47680	.27528	64.0742	66.4430	64.72	65.63
Formula II_3	3	65.9681	1.09773	.63377	63.2412	68.6950	65.32	67.24
Formula III_3	3	48.4206	.49558	.28612	47.1895	49.6516	47.90	48.89
Formula IV_3	3	41.2329	.58349	.33688	39.7834	42.6824	40.63	41.79
Total	36	54.9574	10.88809	1.81468	51.2734	58.6414	39.83	67.24

Test of Homogeneity of Variances

Persen_ED

Levene Statistic	df1	df2	Sig.
1.096	11	24	.405

ANOVA

Persen_ED

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4139.723	11	376.338	946.301	.000
Within Groups	9.545	24	.398		
Total	4149.267	35			

Post Hoc Tests
Multiple Comparisons
Persen_ED
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula I	Formula II	-.99486	.51491	.730	-2.8514	.8617
	Formula III	16.46530*	.51491	.000	14.6087	18.3219
	Formula IV	23.83290*	.51491	.000	21.9763	25.6895
	Formula I_2	.83805	.51491	.882	-1.0185	2.6946
	Formula II_2	-1.26221	.51491	.412	-3.1188	.5944
	Formula III_2	16.89717*	.51491	.000	15.0406	18.7537
	Formula IV_2	24.45501*	.51491	.000	22.5984	26.3116
	Formula I_3	-.40360	.51491	1.000	-2.2602	1.4530
	Formula II_3	-1.11311	.51491	.589	-2.9697	.7435
	Formula III_3	16.43445*	.51491	.000	14.5779	18.2910
	Formula IV_3	23.62211*	.51491	.000	21.7655	25.4787
Formula II	Formula I	.99486	.51491	.730	-.8617	2.8514
	Formula III	17.46015*	.51491	.000	15.6036	19.3167
	Formula IV	24.82776*	.51491	.000	22.9712	26.6843
	Formula I_2	1.83290	.51491	.055	-.0237	3.6895
	Formula II_2	-.26735	.51491	1.000	-2.1239	1.5892
	Formula III_2	17.89203*	.51491	.000	16.0355	19.7486
	Formula IV_2	25.44987*	.51491	.000	23.5933	27.3064
	Formula I_3	.59126	.51491	.988	-1.2653	2.4478
	Formula II_3	-.11825	.51491	1.000	-1.9748	1.7383
	Formula III_3	17.42931*	.51491	.000	15.5727	19.2859
	Formula IV_3	24.61697*	.51491	.000	22.7604	26.4735
Formula III	Formula I	-16.46530*	.51491	.000	-18.3219	-14.6087
	Formula II	-17.46015*	.51491	.000	-19.3167	-15.6036
	Formula IV	7.36761*	.51491	.000	5.5110	9.2242
	Formula I_2	-15.62725*	.51491	.000	-17.4838	-13.7707
	Formula II_2	-17.72751*	.51491	.000	-19.5841	-15.8709
	Formula III_2	.43188	.51491	.999	-1.4247	2.2884
	Formula IV_2	7.98972*	.51491	.000	6.1332	9.8463

	Formula I_3	-16.86889*	.51491	.000	-18.7255	-15.0123
	Formula II_3	-17.57841*	.51491	.000	-19.4350	-15.7218
	Formula III_3	-.03085	.51491	1.000	-1.8874	1.8257
	Formula IV_3	7.15681*	.51491	.000	5.3002	9.0134
Formula IV	Formula I	-23.83290*	.51491	.000	-25.6895	-21.9763
	Formula II	-24.82776*	.51491	.000	-26.6843	-22.9712
	Formula III	-7.36761*	.51491	.000	-9.2242	-5.5110
	Formula I_2	-22.99486*	.51491	.000	-24.8514	-21.1383
	Formula II_2	-25.09512*	.51491	.000	-26.9517	-23.2386
	Formula III_2	-6.93573*	.51491	.000	-8.7923	-5.0792
	Formula IV_2	.62211	.51491	.983	-1.2345	2.4787
	Formula I_3	-24.23650*	.51491	.000	-26.0931	-22.3799
	Formula II_3	-24.94602*	.51491	.000	-26.8026	-23.0895
	Formula III_3	-7.39846*	.51491	.000	-9.2550	-5.5419
	Formula IV_3	-.21080	.51491	1.000	-2.0674	1.6458
Formula I_2	Formula I	-.83805	.51491	.882	-2.6946	1.0185
	Formula II	-1.83290	.51491	.055	-3.6895	.0237
	Formula III	15.62725*	.51491	.000	13.7707	17.4838
	Formula IV	22.99486*	.51491	.000	21.1383	24.8514
	Formula II_2	-2.10026*	.51491	.017	-3.9568	-.2437
	Formula III_2	16.05913*	.51491	.000	14.2026	17.9157
	Formula IV_2	23.61697*	.51491	.000	21.7604	25.4735
	Formula I_3	-1.24165	.51491	.435	-3.0982	.6149
	Formula II_3	-1.95116*	.51491	.033	-3.8077	-.0946
	Formula III_3	15.59640*	.51491	.000	13.7398	17.4530
	Formula IV_3	22.78406*	.51491	.000	20.9275	24.6406
Formula II_2	Formula I	1.26221	.51491	.412	-.5944	3.1188
	Formula II	.26735	.51491	1.000	-1.5892	2.1239
	Formula III	17.72751*	.51491	.000	15.8709	19.5841
	Formula IV	25.09512*	.51491	.000	23.2386	26.9517
	Formula I_2	2.10026*	.51491	.017	.2437	3.9568
	Formula III_2	18.15938*	.51491	.000	16.3028	20.0159
	Formula IV_2	25.71722*	.51491	.000	23.8607	27.5738
	Formula I_3	.85861	.51491	.866	-.9980	2.7152
	Formula II_3	.14910	.51491	1.000	-1.7075	2.0057
	Formula III_3	17.69666*	.51491	.000	15.8401	19.5532

	Formula IV_3	24.88432*	.51491	.000	23.0278	26.7409
Formula III_2	Formula I	-16.89717*	.51491	.000	-18.7537	-15.0406
	Formula II	-17.89203*	.51491	.000	-19.7486	-16.0355
	Formula III	-.43188	.51491	.999	-2.2884	1.4247
	Formula IV	6.93573*	.51491	.000	5.0792	8.7923
	Formula I_2	-16.05913*	.51491	.000	-17.9157	-14.2026
	Formula II_2	-18.15938*	.51491	.000	-20.0159	-16.3028
	Formula IV_2	7.55784*	.51491	.000	5.7013	9.4144
	Formula I_3	-17.30077*	.51491	.000	-19.1573	-15.4442
	Formula II_3	-18.01028*	.51491	.000	-19.8668	-16.1537
	Formula III_3	-.46272	.51491	.998	-2.3193	1.3938
	Formula IV_3	6.72494*	.51491	.000	4.8684	8.5815
Formula IV_2	Formula I	-24.45501*	.51491	.000	-26.3116	-22.5984
	Formula II	-25.44987*	.51491	.000	-27.3064	-23.5933
	Formula III	-7.98972*	.51491	.000	-9.8463	-6.1332
	Formula IV	-.62211	.51491	.983	-2.4787	1.2345
	Formula I_2	-23.61697*	.51491	.000	-25.4735	-21.7604
	Formula II_2	-25.71722*	.51491	.000	-27.5738	-23.8607
	Formula III_2	-7.55784*	.51491	.000	-9.4144	-5.7013
	Formula I_3	-24.85861*	.51491	.000	-26.7152	-23.0020
	Formula II_3	-25.56812*	.51491	.000	-27.4247	-23.7116
	Formula III_3	-8.02057*	.51491	.000	-9.8771	-6.1640
	Formula IV_3	-.83290	.51491	.886	-2.6895	1.0237
Formula I_3	Formula I	.40360	.51491	1.000	-1.4530	2.2602
	Formula II	-.59126	.51491	.988	-2.4478	1.2653
	Formula III	16.86889*	.51491	.000	15.0123	18.7255
	Formula IV	24.23650*	.51491	.000	22.3799	26.0931
	Formula I_2	1.24165	.51491	.435	-.6149	3.0982
	Formula II_2	-.85861	.51491	.866	-2.7152	.9980
	Formula III_2	17.30077*	.51491	.000	15.4442	19.1573
	Formula IV_2	24.85861*	.51491	.000	23.0020	26.7152
	Formula II_3	-.70951	.51491	.957	-2.5661	1.1471
	Formula III_3	16.83805*	.51491	.000	14.9815	18.6946
	Formula IV_3	24.02571*	.51491	.000	22.1691	25.8823
Formula II_3	Formula I	1.11311	.51491	.589	-.7435	2.9697
	Formula II	.11825	.51491	1.000	-1.7383	1.9748

	Formula III	17.57841*	.51491	.000	15.7218	19.4350
	Formula IV	24.94602*	.51491	.000	23.0895	26.8026
	Formula I_2	1.95116*	.51491	.033	.0946	3.8077
	Formula II_2	-.14910	.51491	1.000	-2.0057	1.7075
	Formula III_2	18.01028*	.51491	.000	16.1537	19.8668
	Formula IV_2	25.56812*	.51491	.000	23.7116	27.4247
	Formula I_3	.70951	.51491	.957	-1.1471	2.5661
	Formula III_3	17.54756*	.51491	.000	15.6910	19.4041
	Formula IV_3	24.73522*	.51491	.000	22.8787	26.5918
Formula III_3	Formula I	-16.43445*	.51491	.000	-18.2910	-14.5779
	Formula II	-17.42931*	.51491	.000	-19.2859	-15.5727
	Formula III	.03085	.51491	1.000	-1.8257	1.8874
	Formula IV	7.39846*	.51491	.000	5.5419	9.2550
	Formula I_2	-15.59640*	.51491	.000	-17.4530	-13.7398
	Formula II_2	-17.69666*	.51491	.000	-19.5532	-15.8401
	Formula III_2	.46272	.51491	.998	-1.3938	2.3193
	Formula IV_2	8.02057*	.51491	.000	6.1640	9.8771
	Formula I_3	-16.83805*	.51491	.000	-18.6946	-14.9815
	Formula II_3	-17.54756*	.51491	.000	-19.4041	-15.6910
	Formula IV_3	7.18766*	.51491	.000	5.3311	9.0442
Formula IV_3	Formula I	-23.62211*	.51491	.000	-25.4787	-21.7655
	Formula II	-24.61697*	.51491	.000	-26.4735	-22.7604
	Formula III	-7.15681*	.51491	.000	-9.0134	-5.3002
	Formula IV	.21080	.51491	1.000	-1.6458	2.0674
	Formula I_2	-22.78406*	.51491	.000	-24.6406	-20.9275
	Formula II_2	-24.88432*	.51491	.000	-26.7409	-23.0278
	Formula III_2	-6.72494*	.51491	.000	-8.5815	-4.8684
	Formula IV_2	.83290	.51491	.886	-1.0237	2.6895
	Formula I_3	-24.02571*	.51491	.000	-25.8823	-22.1691
	Formula II_3	-24.73522*	.51491	.000	-26.5918	-22.8787
	Formula III_3	-7.18766*	.51491	.000	-9.0442	-5.3311

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

Homogeneous Subsets

Persen_ED

Tukey HSD

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
Formula IV_2	3	40.4000			
Formula IV	3	41.0221			
Formula IV_3	3	41.2329			
Formula III_2	3		47.9578		
Formula III	3		48.3897		
Formula III_3	3		48.4206		
Formula I_2	3			64.0170	
Formula I	3			64.8550	64.8550
Formula I_3	3			65.2586	65.2586
Formula II	3			65.8499	65.8499
Formula II_3	3				65.9681
Formula II_2	3				66.1172
Sig.		.886	.998	.055	.412

Means for groups in homogeneous subsets are displayed.

8. $k_{disolusi}$

Orde nol

Descriptives

k_disolusi_orde_nol

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	2.65233	.106810	.061667	2.38700	2.91766	2.529	2.714
Formula II	3	1.96133	.009074	.005239	1.93879	1.98387	1.953	1.971
Formula III	3	.90267	.115049	.066424	.61687	1.18846	.770	.975
Formula IV	3	.87167	.005508	.003180	.85799	.88535	.868	.878
Formula I_2	3	2.54033	.124829	.072070	2.23024	2.85043	2.400	2.639
Formula II_2	3	1.95733	.006658	.003844	1.94079	1.97387	1.953	1.965
Formula III_2	3	.97867	.009713	.005608	.95454	1.00279	.968	.987
Formula IV_2	3	.87033	.012342	.007126	.83967	.90099	.860	.884
Formula I_3	3	2.70200	.147976	.085434	2.33441	3.06959	2.591	2.870
Formula II_3	3	1.96033	.012741	.007356	1.92868	1.99198	1.952	1.975
Formula III_3	3	.95467	.003512	.002028	.94594	.96339	.951	.958
Formula IV_3	3	.87900	.011000	.006351	.85167	.90633	.868	.890
Total	36	1.60256	.746847	.124474	1.34986	1.85525	.770	2.870

Test of Homogeneity of Variances

k_disolusi_orde_nol

Levene Statistic	df1	df2	Sig.
8.142	11	24	.000

ANOVA

k_disolusi_orde_nol

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19.397	11	1.763	336.817	.000
Within Groups	.126	24	.005		
Total	19.522	35			

Multiple Comparisons
k_disolusi_orde_nol
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula I	Formula II	.691000*	.059078	.000	.47799	.90401
	Formula III	1.749667*	.059078	.000	1.53665	1.96268
	Formula IV	1.780667*	.059078	.000	1.56765	1.99368
	Formula I_2	.112000	.059078	.751	-.10101	.32501
	Formula II_2	.695000*	.059078	.000	.48199	.90801
	Formula III_2	1.673667*	.059078	.000	1.46065	1.88668
	Formula IV_2	1.782000*	.059078	.000	1.56899	1.99501
	Formula I_3	-.049667	.059078	.999	-.26268	.16335
	Formula II_3	.692000*	.059078	.000	.47899	.90501
	Formula III_3	1.697667*	.059078	.000	1.48465	1.91068
	Formula IV_3	1.773333*	.059078	.000	1.56032	1.98635
Formula II	Formula I	-.691000*	.059078	.000	-.90401	-.47799
	Formula III	1.058667*	.059078	.000	.84565	1.27168
	Formula IV	1.089667*	.059078	.000	.87665	1.30268
	Formula I_2	-.579000*	.059078	.000	-.79201	-.36599
	Formula II_2	.004000	.059078	1.000	-.20901	.21701
	Formula III_2	.982667*	.059078	.000	.76965	1.19568
	Formula IV_2	1.091000*	.059078	.000	.87799	1.30401
	Formula I_3	-.740667*	.059078	.000	-.95368	-.52765
	Formula II_3	.001000	.059078	1.000	-.21201	.21401
	Formula III_3	1.006667*	.059078	.000	.79365	1.21968
	Formula IV_3	1.082333*	.059078	.000	.86932	1.29535
Formula III	Formula I	-1.749667*	.059078	.000	-1.96268	-1.53665
	Formula II	-1.058667*	.059078	.000	-1.27168	-.84565
	Formula IV	.031000	.059078	1.000	-.18201	.24401
	Formula I_2	-1.637667*	.059078	.000	-1.85068	-1.42465
	Formula II_2	-1.054667*	.059078	.000	-1.26768	-.84165
	Formula III_2	-.076000	.059078	.973	-.28901	.13701
	Formula IV_2	.032333	.059078	1.000	-.18068	.24535
	Formula I_3	-1.799333*	.059078	.000	-2.01235	-1.58632

	Formula II_3	-1.057667*	.059078	.000	-1.27068	-.84465
	Formula III_3	-.052000	.059078	.999	-.26501	.16101
	Formula IV_3	.023667	.059078	1.000	-.18935	.23668
Formula IV	Formula I	-1.780667*	.059078	.000	-1.99368	-1.56765
	Formula II	-1.089667*	.059078	.000	-1.30268	-.87665
	Formula III	-.031000	.059078	1.000	-.24401	.18201
	Formula I_2	-1.668667*	.059078	.000	-1.88168	-1.45565
	Formula II_2	-1.085667*	.059078	.000	-1.29868	-.87265
	Formula III_2	-.107000	.059078	.797	-.32001	.10601
	Formula IV_2	.001333	.059078	1.000	-.21168	.21435
	Formula I_3	-1.830333*	.059078	.000	-2.04335	-1.61732
	Formula II_3	-1.088667*	.059078	.000	-1.30168	-.87565
	Formula III_3	-.083000	.059078	.951	-.29601	.13001
	Formula IV_3	-.007333	.059078	1.000	-.22035	.20568
Formula I_2	Formula I	-.112000	.059078	.751	-.32501	.10101
	Formula II	.579000*	.059078	.000	.36599	.79201
	Formula III	1.637667*	.059078	.000	1.42465	1.85068
	Formula IV	1.668667*	.059078	.000	1.45565	1.88168
	Formula II_2	.583000*	.059078	.000	.36999	.79601
	Formula III_2	1.561667*	.059078	.000	1.34865	1.77468
	Formula IV_2	1.670000*	.059078	.000	1.45699	1.88301
	Formula I_3	-.161667	.059078	.268	-.37468	.05135
	Formula II_3	.580000*	.059078	.000	.36699	.79301
	Formula III_3	1.585667*	.059078	.000	1.37265	1.79868
	Formula IV_3	1.661333*	.059078	.000	1.44832	1.87435
Formula II_2	Formula I	-.695000*	.059078	.000	-.90801	-.48199
	Formula II	-.004000	.059078	1.000	-.21701	.20901
	Formula III	1.054667*	.059078	.000	.84165	1.26768
	Formula IV	1.085667*	.059078	.000	.87265	1.29868
	Formula I_2	-.583000*	.059078	.000	-.79601	-.36999
	Formula III_2	.978667*	.059078	.000	.76565	1.19168
	Formula IV_2	1.087000*	.059078	.000	.87399	1.30001
	Formula I_3	-.744667*	.059078	.000	-.95768	-.53165
	Formula II_3	-.003000	.059078	1.000	-.21601	.21001
	Formula III_3	1.002667*	.059078	.000	.78965	1.21568
	Formula IV_3	1.078333*	.059078	.000	.86532	1.29135

Formula III_2	Formula I	-1.673667*	.059078	.000	-1.88668	-1.46065
	Formula II	-.982667*	.059078	.000	-1.19568	-.76965
	Formula III	.076000	.059078	.973	-.13701	.28901
	Formula IV	.107000	.059078	.797	-.10601	.32001
	Formula I_2	-1.561667*	.059078	.000	-1.77468	-1.34865
	Formula II_2	-.978667*	.059078	.000	-1.19168	-.76565
	Formula IV_2	.108333	.059078	.785	-.10468	.32135
	Formula I_3	-1.723333*	.059078	.000	-1.93635	-1.51032
	Formula II_3	-.981667*	.059078	.000	-1.19468	-.76865
	Formula III_3	.024000	.059078	1.000	-.18901	.23701
	Formula IV_3	.099667	.059078	.857	-.11335	.31268
Formula IV_2	Formula I	-1.782000*	.059078	.000	-1.99501	-1.56899
	Formula II	-1.091000*	.059078	.000	-1.30401	-.87799
	Formula III	-.032333	.059078	1.000	-.24535	.18068
	Formula IV	-.001333	.059078	1.000	-.21435	.21168
	Formula I_2	-1.670000*	.059078	.000	-1.88301	-1.45699
	Formula II_2	-1.087000*	.059078	.000	-1.30001	-.87399
	Formula III_2	-.108333	.059078	.785	-.32135	.10468
	Formula I_3	-1.831667*	.059078	.000	-2.04468	-1.61865
	Formula II_3	-1.090000*	.059078	.000	-1.30301	-.87699
	Formula III_3	-.084333	.059078	.946	-.29735	.12868
	Formula IV_3	-.008667	.059078	1.000	-.22168	.20435
Formula I_3	Formula I	.049667	.059078	.999	-.16335	.26268
	Formula II	.740667*	.059078	.000	.52765	.95368
	Formula III	1.799333*	.059078	.000	1.58632	2.01235
	Formula IV	1.830333*	.059078	.000	1.61732	2.04335
	Formula I_2	.161667	.059078	.268	-.05135	.37468
	Formula II_2	.744667*	.059078	.000	.53165	.95768
	Formula III_2	1.723333*	.059078	.000	1.51032	1.93635
	Formula IV_2	1.831667*	.059078	.000	1.61865	2.04468
	Formula II_3	.741667*	.059078	.000	.52865	.95468
	Formula III_3	1.747333*	.059078	.000	1.53432	1.96035
	Formula IV_3	1.823000*	.059078	.000	1.60999	2.03601
Formula II_3	Formula I	-.692000*	.059078	.000	-.90501	-.47899
	Formula II	-.001000	.059078	1.000	-.21401	.21201
	Formula III	1.057667*	.059078	.000	.84465	1.27068

	Formula IV	1.088667*	.059078	.000	.87565	1.30168
	Formula I_2	-.580000*	.059078	.000	-.79301	-.36699
	Formula II_2	.003000	.059078	1.000	-.21001	.21601
	Formula III_2	.981667*	.059078	.000	.76865	1.19468
	Formula IV_2	1.090000*	.059078	.000	.87699	1.30301
	Formula I_3	-.741667*	.059078	.000	-.95468	-.52865
	Formula III_3	1.005667*	.059078	.000	.79265	1.21868
	Formula IV_3	1.081333*	.059078	.000	.86832	1.29435
Formula III_3	Formula I	-1.697667*	.059078	.000	-1.91068	-1.48465
	Formula II	-1.006667*	.059078	.000	-1.21968	-.79365
	Formula III	.052000	.059078	.999	-.16101	.26501
	Formula IV	.083000	.059078	.951	-.13001	.29601
	Formula I_2	-1.585667*	.059078	.000	-1.79868	-1.37265
	Formula II_2	-1.002667*	.059078	.000	-1.21568	-.78965
	Formula III_2	-.024000	.059078	1.000	-.23701	.18901
	Formula IV_2	.084333	.059078	.946	-.12868	.29735
	Formula I_3	-1.747333*	.059078	.000	-1.96035	-1.53432
	Formula II_3	-1.005667*	.059078	.000	-1.21868	-.79265
	Formula IV_3	.075667	.059078	.974	-.13735	.28868
Formula IV_3	Formula I	-1.773333*	.059078	.000	-1.98635	-1.56032
	Formula II	-1.082333*	.059078	.000	-1.29535	-.86932
	Formula III	-.023667	.059078	1.000	-.23668	.18935
	Formula IV	.007333	.059078	1.000	-.20568	.22035
	Formula I_2	-1.661333*	.059078	.000	-1.87435	-1.44832
	Formula II_2	-1.078333*	.059078	.000	-1.29135	-.86532
	Formula III_2	-.099667	.059078	.857	-.31268	.11335
	Formula IV_2	.008667	.059078	1.000	-.20435	.22168
	Formula I_3	-1.823000*	.059078	.000	-2.03601	-1.60999
	Formula II_3	-1.081333*	.059078	.000	-1.29435	-.86832
	Formula III_3	-.075667	.059078	.974	-.28868	.13735

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

Orde satu

Descriptives

k_disolusi_orde_satu

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	.02333	.001155	.000667	.02046	.02620	.022	.024
Formula II	3	.02400	.003606	.002082	.01504	.03296	.020	.027
Formula III	3	.00900	.000000	.000000	.00900	.00900	.009	.009
Formula IV	3	.00700	.001000	.000577	.00452	.00948	.006	.008
Formula I_2	3	.02200	.001000	.000577	.01952	.02448	.021	.023
Formula II_2	3	.02833	.004726	.002728	.01659	.04007	.023	.032
Formula III_2	3	.00900	.000000	.000000	.00900	.00900	.009	.009
Formula IV_2	3	.00633	.000577	.000333	.00490	.00777	.006	.007
Formula I_3	3	.02433	.001155	.000667	.02146	.02720	.023	.025
Formula II_3	3	.02533	.001528	.000882	.02154	.02913	.024	.027
Formula III_3	3	.01000	.001000	.000577	.00752	.01248	.009	.011
Formula IV_3	3	.02733	.036950	.021333	-.06446	.11912	.006	.070
Total	36	.01800	.012389	.002065	.01381	.02219	.006	.070

Test of Homogeneity of Variances

k_disolusi_orde_satu

Levene Statistic	df1	df2	Sig.
14.385	11	24	.000

ANOVA

k_disolusi_orde_satu

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.003	11	.000	1.977	.079
Within Groups	.003	24	.000		
Total	.005	35			

Higuchi

Descriptives

k_disolusi_higuchi

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula I	3	3.50567E1	1.408735	.813333	31.55718	38.55616	33.430	35.870
Formula II	3	3.76300E1	.185203	.106927	37.16993	38.09007	37.440	37.810
Formula III	3	2.46567E1	.208407	.120324	24.13896	25.17438	24.430	24.840
Formula IV	3	2.17833E1	.162891	.094045	21.37869	22.18798	21.670	21.970
Formula I_2	3	3.29800E1	1.180000	.681273	30.04872	35.91128	31.800	34.160
Formula II_2	3	3.55567E1	.963033	.556008	33.16436	37.94897	34.530	36.440
Formula III_2	3	2.48300E1	.250599	.144684	24.20748	25.45252	24.570	25.070
Formula IV_2	3	2.17200E1	.284781	.164418	21.01257	22.42743	21.470	22.030
Formula I_3	3	3.46500E1	1.468571	.847880	31.00187	38.29813	33.430	36.280
Formula II_3	3	3.76500E1	.329090	.190000	36.83250	38.46750	37.460	38.030
Formula III_3	3	2.42933E1	.041633	.024037	24.18991	24.39676	24.260	24.340
Formula IV_3	3	2.19467E1	.282902	.163333	21.24390	22.64943	21.690	22.250
Total	36	2.93961E1	6.498482	1.083080	27.19734	31.59488	21.470	38.030

Test of Homogeneity of Variances

k_disolusi_higuchi

Levene Statistic	df1	df2	Sig.
3.945	11	24	.002

ANOVA

k_disolusi_higuchi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1464.261	11	133.115	231.527	.000
Within Groups	13.799	24	.575		
Total	1478.059	35			

Multiple Comparisons
k_disolusi_higuchi
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula I	Formula II	-2.573333*	.619108	.015	-4.80561	-.34106
	Formula III	10.400000*	.619108	.000	8.16773	12.63227
	Formula IV	13.273333*	.619108	.000	11.04106	15.50561
	Formula I_2	2.076667	.619108	.085	-.15561	4.30894
	Formula II_2	-.500000	.619108	.999	-2.73227	1.73227
	Formula III_2	10.226667*	.619108	.000	7.99439	12.45894
	Formula IV_2	13.336667*	.619108	.000	11.10439	15.56894
	Formula I_3	.406667	.619108	1.000	-1.82561	2.63894
	Formula II_3	-2.593333*	.619108	.013	-4.82561	-.36106
	Formula III_3	10.763333*	.619108	.000	8.53106	12.99561
	Formula IV_3	13.110000*	.619108	.000	10.87773	15.34227
Formula II	Formula I	2.573333*	.619108	.015	.34106	4.80561
	Formula III	12.973333*	.619108	.000	10.74106	15.20561
	Formula IV	15.846667*	.619108	.000	13.61439	18.07894
	Formula I_2	4.650000*	.619108	.000	2.41773	6.88227
	Formula II_2	2.073333	.619108	.086	-.15894	4.30561
	Formula III_2	12.800000*	.619108	.000	10.56773	15.03227
	Formula IV_2	15.910000*	.619108	.000	13.67773	18.14227
	Formula I_3	2.980000*	.619108	.003	.74773	5.21227
	Formula II_3	-.020000	.619108	1.000	-2.25227	2.21227
	Formula III_3	13.336667*	.619108	.000	11.10439	15.56894
	Formula IV_3	15.683333*	.619108	.000	13.45106	17.91561
Formula III	Formula I	-10.400000*	.619108	.000	-12.63227	-8.16773
	Formula II	-12.973333*	.619108	.000	-15.20561	-10.74106
	Formula IV	2.873333*	.619108	.005	.64106	5.10561
	Formula I_2	-8.323333*	.619108	.000	-10.55561	-6.09106
	Formula II_2	-10.900000*	.619108	.000	-13.13227	-8.66773
	Formula III_2	-.173333	.619108	1.000	-2.40561	2.05894
	Formula IV_2	2.936667*	.619108	.004	.70439	5.16894
	Formula I_3	-9.993333*	.619108	.000	-12.22561	-7.76106

	Formula II_3	-12.993333*	.619108	.000	-15.22561	-10.76106
	Formula III_3	.363333	.619108	1.000	-1.86894	2.59561
	Formula IV_3	2.710000*	.619108	.009	.47773	4.94227
Formula IV	Formula I	-13.273333*	.619108	.000	-15.50561	-11.04106
	Formula II	-15.846667*	.619108	.000	-18.07894	-13.61439
	Formula III	-2.873333*	.619108	.005	-5.10561	-.64106
	Formula I_2	-11.196667*	.619108	.000	-13.42894	-8.96439
	Formula II_2	-13.773333*	.619108	.000	-16.00561	-11.54106
	Formula III_2	-3.046667*	.619108	.002	-5.27894	-.81439
	Formula IV_2	.063333	.619108	1.000	-2.16894	2.29561
	Formula I_3	-12.866667*	.619108	.000	-15.09894	-10.63439
	Formula II_3	-15.866667*	.619108	.000	-18.09894	-13.63439
	Formula III_3	-2.510000*	.619108	.018	-4.74227	-.27773
	Formula IV_3	-.163333	.619108	1.000	-2.39561	2.06894
Formula I_2	Formula I	-2.076667	.619108	.085	-4.30894	.15561
	Formula II	-4.650000*	.619108	.000	-6.88227	-2.41773
	Formula III	8.323333*	.619108	.000	6.09106	10.55561
	Formula IV	11.196667*	.619108	.000	8.96439	13.42894
	Formula II_2	-2.576667*	.619108	.014	-4.80894	-.34439
	Formula III_2	8.150000*	.619108	.000	5.91773	10.38227
	Formula IV_2	11.260000*	.619108	.000	9.02773	13.49227
	Formula I_3	-1.670000	.619108	.285	-3.90227	.56227
	Formula II_3	-4.670000*	.619108	.000	-6.90227	-2.43773
	Formula III_3	8.686667*	.619108	.000	6.45439	10.91894
	Formula IV_3	11.033333*	.619108	.000	8.80106	13.26561
Formula II_2	Formula I	.500000	.619108	.999	-1.73227	2.73227
	Formula II	-2.073333	.619108	.086	-4.30561	.15894
	Formula III	10.900000*	.619108	.000	8.66773	13.13227
	Formula IV	13.773333*	.619108	.000	11.54106	16.00561
	Formula I_2	2.576667*	.619108	.014	.34439	4.80894
	Formula III_2	10.726667*	.619108	.000	8.49439	12.95894
	Formula IV_2	13.836667*	.619108	.000	11.60439	16.06894
	Formula I_3	.906667	.619108	.937	-1.32561	3.13894
	Formula II_3	-2.093333	.619108	.080	-4.32561	.13894
	Formula III_3	11.263333*	.619108	.000	9.03106	13.49561
	Formula IV_3	13.610000*	.619108	.000	11.37773	15.84227

Formula III_2	Formula I	-10.226667*	.619108	.000	-12.45894	-7.99439
	Formula II	-12.800000*	.619108	.000	-15.03227	-10.56773
	Formula III	.173333	.619108	1.000	-2.05894	2.40561
	Formula IV	3.046667*	.619108	.002	.81439	5.27894
	Formula I_2	-8.150000*	.619108	.000	-10.38227	-5.91773
	Formula II_2	-10.726667*	.619108	.000	-12.95894	-8.49439
	Formula IV_2	3.110000*	.619108	.002	.87773	5.34227
	Formula I_3	-9.820000*	.619108	.000	-12.05227	-7.58773
	Formula II_3	-12.820000*	.619108	.000	-15.05227	-10.58773
	Formula III_3	.536667	.619108	.999	-1.69561	2.76894
	Formula IV_3	2.883333*	.619108	.004	.65106	5.11561
Formula IV_2	Formula I	-13.336667*	.619108	.000	-15.56894	-11.10439
	Formula II	-15.910000*	.619108	.000	-18.14227	-13.67773
	Formula III	-2.936667*	.619108	.004	-5.16894	-.70439
	Formula IV	-.063333	.619108	1.000	-2.29561	2.16894
	Formula I_2	-11.260000*	.619108	.000	-13.49227	-9.02773
	Formula II_2	-13.836667*	.619108	.000	-16.06894	-11.60439
	Formula III_2	-3.110000*	.619108	.002	-5.34227	-.87773
	Formula I_3	-12.930000*	.619108	.000	-15.16227	-10.69773
	Formula II_3	-15.930000*	.619108	.000	-18.16227	-13.69773
	Formula III_3	-2.573333*	.619108	.015	-4.80561	-.34106
	Formula IV_3	-.226667	.619108	1.000	-2.45894	2.00561
Formula I_3	Formula I	-.406667	.619108	1.000	-2.63894	1.82561
	Formula II	-2.980000*	.619108	.003	-5.21227	-.74773
	Formula III	9.993333*	.619108	.000	7.76106	12.22561
	Formula IV	12.866667*	.619108	.000	10.63439	15.09894
	Formula I_2	1.670000	.619108	.285	-.56227	3.90227
	Formula II_2	-.906667	.619108	.937	-3.13894	1.32561
	Formula III_2	9.820000*	.619108	.000	7.58773	12.05227
	Formula IV_2	12.930000*	.619108	.000	10.69773	15.16227
	Formula II_3	-3.000000*	.619108	.003	-5.23227	-.76773
	Formula III_3	10.356667*	.619108	.000	8.12439	12.58894
	Formula IV_3	12.703333*	.619108	.000	10.47106	14.93561
Formula II_3	Formula I	2.593333*	.619108	.013	.36106	4.82561
	Formula II	.020000	.619108	1.000	-2.21227	2.25227
	Formula III	12.993333*	.619108	.000	10.76106	15.22561

	Formula IV	15.866667*	.619108	.000	13.63439	18.09894
	Formula I_2	4.670000*	.619108	.000	2.43773	6.90227
	Formula II_2	2.093333	.619108	.080	-.13894	4.32561
	Formula III_2	12.820000*	.619108	.000	10.58773	15.05227
	Formula IV_2	15.930000*	.619108	.000	13.69773	18.16227
	Formula I_3	3.000000*	.619108	.003	.76773	5.23227
	Formula III_3	13.356667*	.619108	.000	11.12439	15.58894
	Formula IV_3	15.703333*	.619108	.000	13.47106	17.93561
Formula III_3	Formula I	-10.763333*	.619108	.000	-12.99561	-8.53106
	Formula II	-13.336667*	.619108	.000	-15.56894	-11.10439
	Formula III	-.363333	.619108	1.000	-2.59561	1.86894
	Formula IV	2.510000*	.619108	.018	.27773	4.74227
	Formula I_2	-8.686667*	.619108	.000	-10.91894	-6.45439
	Formula II_2	-11.263333*	.619108	.000	-13.49561	-9.03106
	Formula III_2	-.536667	.619108	.999	-2.76894	1.69561
	Formula IV_2	2.573333*	.619108	.015	.34106	4.80561
	Formula I_3	-10.356667*	.619108	.000	-12.58894	-8.12439
	Formula II_3	-13.356667*	.619108	.000	-15.58894	-11.12439
	Formula IV_3	2.346667*	.619108	.033	.11439	4.57894
Formula IV_3	Formula I	-13.110000*	.619108	.000	-15.34227	-10.87773
	Formula II	-15.683333*	.619108	.000	-17.91561	-13.45106
	Formula III	-2.710000*	.619108	.009	-4.94227	-.47773
	Formula IV	.163333	.619108	1.000	-2.06894	2.39561
	Formula I_2	-11.033333*	.619108	.000	-13.26561	-8.80106
	Formula II_2	-13.610000*	.619108	.000	-15.84227	-11.37773
	Formula III_2	-2.883333*	.619108	.004	-5.11561	-.65106
	Formula IV_2	.226667	.619108	1.000	-2.00561	2.45894
	Formula I_3	-12.703333*	.619108	.000	-14.93561	-10.47106
	Formula II_3	-15.703333*	.619108	.000	-17.93561	-13.47106
	Formula III_3	-2.346667*	.619108	.033	-4.57894	-.11439

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

LAMPIRAN L

HASIL UJI F KURVA BAKU

1. Kurva Baku Penetapan Kadar

Regresi I

Konsentrasi	Absorbansi	X^2	Y^2	XY
1,009	0,112	1,018	0,013	0,113
2,523	0,237	6,365	0,056	0,597
4,036	0,337	16,289	0,114	1,360
5,549	0,465	30,791	0,216	2,580
7,063	0,591	49,886	0,349	4,174
	Σ	104,349	0,615	8,824

Regresi II

Konsentrasi	Absorbansi	X^2	Y^2	XY
1,002	0,086	1,004	0,007	0,086
2,505	0,208	6,275	0,043	0,521
4,008	0,304	16,064	0,092	1,218
5,511	0,442	30,371	0,195	2,435
7,014	0,533	49,196	0,284	3,738
	Σ	102,910	0,621	7,998

Regresi III

Konsentrasi	Absorbansi	X^2	Y^2	XY
1,003	0,065	1,006	0,004	0,065
2,508	0,204	6,290	0,041	0,511
4,012	0,312	16,096	0,097	1,251
5,517	0,433	30,437	0,187	2,388
7,021	0,532	49,290	0,283	3,735
	Σ	103,119	0,612	7,950

Regresi	ΣX^2	ΣY^2	ΣXY	N	SSi	RDF
I	104,349	0,615	8,824	5	0,530	4
II	102,910	0,621	7,998	5	0,543	4
III	103,119	0,612	7,950	5	0,534	4
Σ	310,378	1,848	24,772		1,607	

SSc = 1,848 - (24,772 : 310,378) = 1,768

F = ((1,768 - 1,607) : (3-1)) : (1,607 : 12) = 0,601

F hitung < F tabel (2,12) = 3,89

2. Kurva Baku Uji Disolusi

Regresi I

Konsentrasi	Absorbansi	X^2	Y^2	XY
0,505	0,023	0,255	0,001	0,012
1,009	0,112	1,018	0,013	0,113
2,523	0,237	6,365	0,056	0,597
4,036	0,337	16,289	0,114	1,360
5,549	0,465	30,791	0,216	2,580
7,063	0,591	49,886	0,349	4,174
8,577	0,697	73,565	0,486	5,978
10,09	0,792	101,808	0,627	7,991
	Σ	279,977	1,729	22,805

Regresi II

Konsentrasi	Absorbansi	X^2	Y^2	XY
0,501	0,024	0,251	0,001	0,012
1,002	0,086	1,004	0,007	0,086
2,505	0,208	6,275	0,043	0,521
4,008	0,304	16,064	0,092	1,218
5,511	0,442	30,371	0,195	2,435
7,014	0,533	49,196	0,284	3,738
8,517	0,635	72,539	0,403	5,408
10,02	0,738	100,400	0,545	7,395
	Σ	276,100	1,570	20,813

Regresi III

Konsentrasi	Absorbansi	X^2	Y^2	XY
0,500	0,029	0,250	0,001	0,015
1,003	0,065	1,006	0,004	0,065
2,508	0,204	6,290	0,041	0,511
4,012	0,312	16,096	0,097	1,251
5,517	0,433	30,437	0,187	2,388
7,021	0,532	49,290	0,283	3,735
8,526	0,658	72,693	0,394	5,610
10,03	0,776	100,600	0,602	7,783
	Σ	276,662	1,609	21,358

Regresi	ΣX^2	ΣY^2	ΣXY	N	SSi	RDF
I	279,977	1,729	22,805	8	1,648	7
II	276,100	1,570	20,813	8	1,495	7
III	276,662	1,609	21,358	8	1,532	7
Σ	832,739	4,908	64,976		4,675	

SSc = 4,908 - (64,976 : 832,739) = 4,830

F = ((4,830 - 4,675) : (3-1)) : (4,675 : 21) = 0,348

F hitung < F tabel (2,21) = 3,47

LAMPIRAN M

CONTOH PERHITUNGAN *DESIGN EXPERT*

Bahan	Konsentrasi		Prediksi mutu fisik tablet metformin HCl
	Nilai notasi	Nilai riil	
Xanthan Gum	+1	3,75	Kekerasan tablet = 17,8 kgf
Locust Bean Gum	+1	3,75	Kerapuhan tablet = 0,18%
			Pelepasan obat menit ke-360 = 71,48%

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

Xanthan Gum:

$$1 = \frac{X' - 2{,}5}{\frac{1}{2} \times 2{,}5}$$

X' = 3,75%

Locust Bean Gum:

$$1 = \frac{X' - 2{,}5}{\frac{1}{2} \times 2{,}5}$$

X' = 3,75%

LAMPIRAN N

TABEL UJI F

df untuk penyebut (N2)	df untuk pembilang (N1)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	161	199	216	225	230	234	237	239	241	242	243	244	245	245	246
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.40	19.41	19.42	19.42	19.43
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.73	8.71	8.70
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.94	5.91	5.89	5.87	5.86
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.66	4.64	4.62
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.98	3.96	3.94
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.55	3.53	3.51
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.05	3.03	3.01
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.76	2.74	2.72
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.66	2.64	2.62
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.58	2.55	2.53
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.51	2.48	2.46
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.40
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.40	2.37	2.35
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.22	2.20
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.22	2.20	2.18
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.20	2.17	2.15
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.20	2.18	2.15	2.13
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.15	2.13	2.11
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.20	2.16	2.14	2.11	2.09
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.17	2.13	2.10	2.08	2.06
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.10	2.08	2.05	2.03
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01
31	4.16	3.30	2.91	2.68	2.52	2.41	2.32	2.25	2.20	2.15	2.11	2.08	2.05	2.03	2.00
32	4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14	2.10	2.07	2.04	2.01	1.99
33	4.14	3.28	2.89	2.66	2.50	2.39	2.30	2.23	2.18	2.13	2.09	2.06	2.03	2.00	1.98
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12	2.08	2.05	2.02	1.99	1.97
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11	2.07	2.04	2.01	1.99	1.96
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11	2.07	2.03	2.00	1.98	1.95
37	4.11	3.25	2.86	2.63	2.47	2.36	2.27	2.20	2.14	2.10	2.06	2.02	2.00	1.97	1.95
38	4.10	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.99	1.96	1.94
39	4.09	3.24	2.85	2.61	2.46	2.34	2.26	2.19	2.13	2.08	2.04	2.01	1.98	1.95	1.93
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.97	1.95	1.92
41	4.08	3.23	2.83	2.60	2.44	2.33	2.24	2.17	2.12	2.07	2.03	2.00	1.97	1.94	1.92
42	4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.03	1.99	1.96	1.94	1.91
43	4.07	3.21	2.82	2.59	2.43	2.32	2.23	2.16	2.11	2.06	2.02	1.99	1.96	1.93	1.91
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	1.95	1.92	1.90
45	4.06	3.20	2.81	2.58	2.42	2.31	2.22	2.15	2.10	2.05	2.01	1.97	1.94	1.92	1.89

df untuk penyebut (N2)	df untuk pembilang (N1)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
46	4.05	3.20	2.81	2.57	2.42	2.30	2.22	2.15	2.09	2.04	2.00	1.97	1.94	1.91	1.89
47	4.05	3.20	2.80	2.57	2.41	2.30	2.21	2.14	2.09	2.04	2.00	1.96	1.93	1.91	1.88
48	4.04	3.19	2.80	2.57	2.41	2.29	2.21	2.14	2.08	2.03	1.99	1.96	1.93	1.90	1.88
49	4.04	3.19	2.79	2.56	2.40	2.29	2.20	2.13	2.08	2.03	1.99	1.96	1.93	1.90	1.88
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.03	1.99	1.95	1.92	1.89	1.87
51	4.03	3.18	2.79	2.55	2.40	2.28	2.20	2.13	2.07	2.02	1.98	1.95	1.92	1.89	1.87
52	4.03	3.18	2.78	2.55	2.39	2.28	2.19	2.12	2.07	2.02	1.98	1.94	1.91	1.89	1.86
53	4.02	3.17	2.78	2.55	2.39	2.28	2.19	2.12	2.06	2.01	1.97	1.94	1.91	1.88	1.86
54	4.02	3.17	2.78	2.54	2.39	2.27	2.18	2.12	2.06	2.01	1.97	1.94	1.91	1.88	1.86
55	4.02	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.06	2.01	1.97	1.93	1.90	1.88	1.85
56	4.01	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.05	2.00	1.96	1.93	1.90	1.87	1.85
57	4.01	3.16	2.77	2.53	2.38	2.26	2.18	2.11	2.05	2.00	1.96	1.93	1.90	1.87	1.85
58	4.01	3.16	2.76	2.53	2.37	2.26	2.17	2.10	2.05	2.00	1.96	1.92	1.89	1.87	1.84
59	4.00	3.15	2.76	2.53	2.37	2.26	2.17	2.10	2.04	2.00	1.96	1.92	1.89	1.86	1.84
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.89	1.86	1.84
61	4.00	3.15	2.76	2.52	2.37	2.25	2.16	2.09	2.04	1.99	1.95	1.91	1.88	1.86	1.83
62	4.00	3.15	2.75	2.52	2.36	2.25	2.16	2.09	2.03	1.99	1.95	1.91	1.88	1.85	1.83
63	3.99	3.14	2.75	2.52	2.36	2.25	2.16	2.09	2.03	1.98	1.94	1.91	1.88	1.85	1.83
64	3.99	3.14	2.75	2.52	2.36	2.24	2.16	2.09	2.03	1.98	1.94	1.91	1.88	1.85	1.83
65	3.99	3.14	2.75	2.51	2.36	2.24	2.15	2.08	2.03	1.98	1.94	1.90	1.87	1.85	1.82
66	3.99	3.14	2.74	2.51	2.35	2.24	2.15	2.08	2.03	1.98	1.94	1.90	1.87	1.84	1.82
67	3.98	3.13	2.74	2.51	2.35	2.24	2.15	2.08	2.02	1.98	1.93	1.90	1.87	1.84	1.82
68	3.98	3.13	2.74	2.51	2.35	2.24	2.15	2.08	2.02	1.97	1.93	1.90	1.87	1.84	1.82
69	3.98	3.13	2.74	2.50	2.35	2.23	2.15	2.08	2.02	1.97	1.93	1.90	1.86	1.84	1.81
70	3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02	1.97	1.93	1.89	1.86	1.84	1.81
71	3.98	3.13	2.73	2.50	2.34	2.23	2.14	2.07	2.01	1.97	1.93	1.89	1.86	1.83	1.81
72	3.97	3.12	2.73	2.50	2.34	2.23	2.14	2.07	2.01	1.96	1.92	1.89	1.86	1.83	1.81
73	3.97	3.12	2.73	2.50	2.34	2.23	2.14	2.07	2.01	1.96	1.92	1.89	1.86	1.83	1.81
74	3.97	3.12	2.73	2.50	2.34	2.22	2.14	2.07	2.01	1.96	1.92	1.89	1.85	1.83	1.80
75	3.97	3.12	2.73	2.49	2.34	2.22	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.83	1.80
76	3.97	3.12	2.72	2.49	2.33	2.22	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.82	1.80
77	3.97	3.12	2.72	2.49	2.33	2.22	2.13	2.06	2.00	1.96	1.92	1.88	1.85	1.82	1.80
78	3.96	3.11	2.72	2.49	2.33	2.22	2.13	2.06	2.00	1.95	1.91	1.88	1.85	1.82	1.80
79	3.96	3.11	2.72	2.49	2.33	2.22	2.13	2.06	2.00	1.95	1.91	1.88	1.85	1.82	1.79
80	3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2.00	1.95	1.91	1.88	1.84	1.82	1.79
81	3.96	3.11	2.72	2.48	2.33	2.21	2.12	2.05	2.00	1.95	1.91	1.87	1.84	1.82	1.79
82	3.96	3.11	2.72	2.48	2.33	2.21	2.12	2.05	2.00	1.95	1.91	1.87	1.84	1.81	1.79
83	3.96	3.11	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.95	1.91	1.87	1.84	1.81	1.79
84	3.95	3.11	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.95	1.90	1.87	1.84	1.81	1.79
85	3.95	3.10	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.94	1.90	1.87	1.84	1.81	1.79
86	3.95	3.10	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.94	1.90	1.87	1.84	1.81	1.78
87	3.95	3.10	2.71	2.48	2.32	2.20	2.12	2.05	1.99	1.94	1.90	1.87	1.83	1.81	1.78
88	3.95	3.10	2.71	2.48	2.32	2.20	2.12	2.05	1.99	1.94	1.90	1.86	1.83	1.81	1.78
89	3.95	3.10	2.71	2.47	2.32	2.20	2.11	2.04	1.99	1.94	1.90	1.86	1.83	1.80	1.78
90	3.95	3.10	2.71	2.47	2.32	2.20	2.11	2.04	1.99	1.94	1.90	1.86	1.83	1.80	1.78

df untuk penyebut (N2)	df untuk pembilang (N1)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
91	3.95	3.10	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.94	1.90	1.86	1.83	1.80	1.78
92	3.94	3.10	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.94	1.89	1.86	1.83	1.80	1.78
93	3.94	3.09	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.93	1.89	1.86	1.83	1.80	1.78
94	3.94	3.09	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.93	1.89	1.86	1.83	1.80	1.77
95	3.94	3.09	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.93	1.89	1.86	1.82	1.80	1.77
96	3.94	3.09	2.70	2.47	2.31	2.19	2.11	2.04	1.98	1.93	1.89	1.85	1.82	1.80	1.77
97	3.94	3.09	2.70	2.47	2.31	2.19	2.11	2.04	1.98	1.93	1.89	1.85	1.82	1.80	1.77
98	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.98	1.93	1.89	1.85	1.82	1.79	1.77
99	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.98	1.93	1.89	1.85	1.82	1.79	1.77
100	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97	1.93	1.89	1.85	1.82	1.79	1.77
101	3.94	3.09	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.93	1.88	1.85	1.82	1.79	1.77
102	3.93	3.09	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.77
103	3.93	3.08	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.76
104	3.93	3.08	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.76
105	3.93	3.08	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.92	1.88	1.85	1.81	1.79	1.76
106	3.93	3.08	2.69	2.46	2.30	2.19	2.10	2.03	1.97	1.92	1.88	1.84	1.81	1.79	1.76
107	3.93	3.08	2.69	2.46	2.30	2.18	2.10	2.03	1.97	1.92	1.88	1.84	1.81	1.79	1.76
108	3.93	3.08	2.69	2.46	2.30	2.18	2.10	2.03	1.97	1.92	1.88	1.84	1.81	1.78	1.76
109	3.93	3.08	2.69	2.45	2.30	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
110	3.93	3.08	2.69	2.45	2.30	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
111	3.93	3.08	2.69	2.45	2.30	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
112	3.93	3.08	2.69	2.45	2.30	2.18	2.09	2.02	1.96	1.92	1.88	1.84	1.81	1.78	1.76
113	3.93	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.92	1.87	1.84	1.81	1.78	1.76
114	3.92	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
115	3.92	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
116	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
117	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.80	1.78	1.75
118	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.80	1.78	1.75
119	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.83	1.80	1.78	1.75
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.83	1.80	1.78	1.75
121	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96	1.91	1.87	1.83	1.80	1.77	1.75
122	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96	1.91	1.87	1.83	1.80	1.77	1.75
123	3.92	3.07	2.68	2.45	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.80	1.77	1.75
124	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.80	1.77	1.75
125	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.80	1.77	1.75
126	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.87	1.83	1.80	1.77	1.75
127	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.86	1.83	1.80	1.77	1.75
128	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.86	1.83	1.80	1.77	1.75
129	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.80	1.77	1.74
130	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.80	1.77	1.74
131	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.80	1.77	1.74
132	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.79	1.77	1.74
133	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.79	1.77	1.74
134	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.83	1.79	1.77	1.74
135	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.90	1.86	1.82	1.79	1.77	1.74

LAMPIRAN O

TABEL UJI t

Pr / df	0.25 / 0.50	0.10 / 0.20	0.05 / 0.10	0.025 / 0.050	0.01 / 0.02	0.005 / 0.010	0.001 / 0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
16	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
17	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
18	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
19	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
20	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181
21	0.68635	1.32319	1.72074	2.07961	2.51765	2.83136	3.52715
22	0.68581	1.32124	1.71714	2.07387	2.50832	2.81876	3.50499
23	0.68531	1.31946	1.71387	2.06866	2.49987	2.80734	3.48496
24	0.68485	1.31784	1.71088	2.06390	2.49216	2.79694	3.46678
25	0.68443	1.31635	1.70814	2.05954	2.48511	2.78744	3.45019
26	0.68404	1.31497	1.70562	2.05553	2.47863	2.77871	3.43500
27	0.68368	1.31370	1.70329	2.05183	2.47266	2.77068	3.42103
28	0.68335	1.31253	1.70113	2.04841	2.46714	2.76326	3.40816
29	0.68304	1.31143	1.69913	2.04523	2.46202	2.75639	3.39624
30	0.68276	1.31042	1.69726	2.04227	2.45726	2.75000	3.38518
31	0.68249	1.30946	1.69552	2.03951	2.45282	2.74404	3.37490
32	0.68223	1.30857	1.69389	2.03693	2.44868	2.73848	3.36531
33	0.68200	1.30774	1.69236	2.03452	2.44479	2.73328	3.35634
34	0.68177	1.30695	1.69092	2.03224	2.44115	2.72839	3.34793
35	0.68156	1.30621	1.68957	2.03011	2.43772	2.72381	3.34005
36	0.68137	1.30551	1.68830	2.02809	2.43449	2.71948	3.33262
37	0.68118	1.30485	1.68709	2.02619	2.43145	2.71541	3.32563
38	0.68100	1.30423	1.68595	2.02439	2.42857	2.71156	3.31903
39	0.68083	1.30364	1.68488	2.02269	2.42584	2.70791	3.31279
40	0.68067	1.30308	1.68385	2.02108	2.42326	2.70446	3.30688

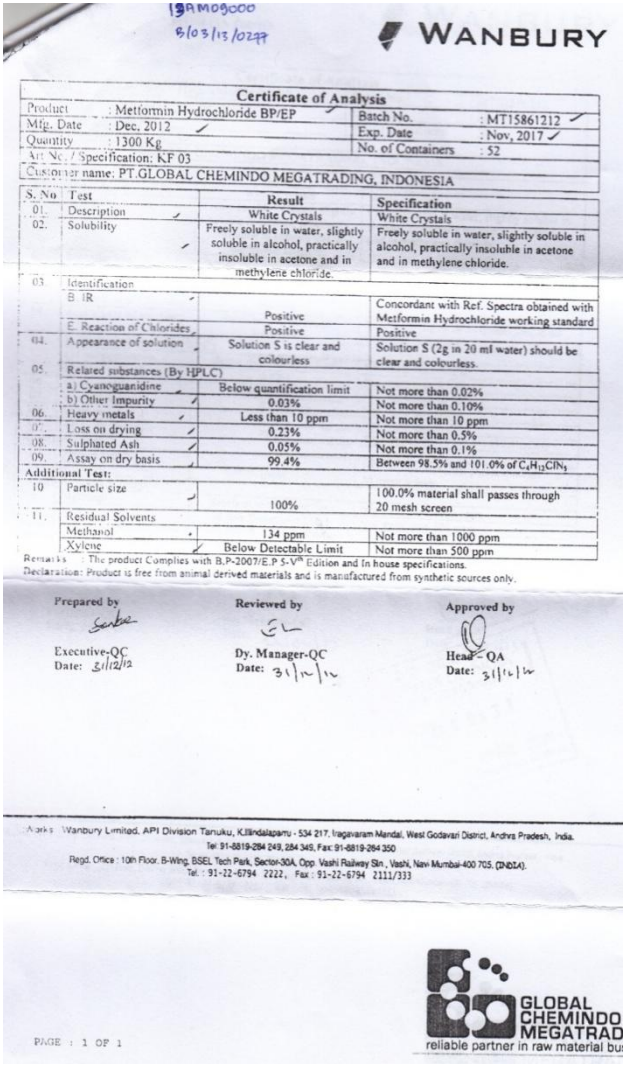
LAMPIRAN P

TABEL r

N	Taraf Signif		N	Taraf Signif		N	Taraf Signif	
	5%	1%		5%	1%		5%	1%
3	0.997	0.999	27	0.381	0.487	55	0.266	0.345
4	0.950	0.990	28	0.374	0.478	60	0.254	0.330
5	0.878	0.959	29	0.367	0.470	65	0.244	0.317
6	0.811	0.917	30	0.361	0.463	70	0.235	0.306
7	0.754	0.874	31	0.355	0.456	75	0.227	0.296
8	0.707	0.834	32	0.349	0.449	80	0.220	0.286
9	0.666	0.798	33	0.344	0.442	85	0.213	0.278
10	0.632	0.765	34	0.339	0.436	90	0.207	0.270
11	0.602	0.735	35	0.334	0.430	95	0.202	0.263
12	0.576	0.708	36	0.329	0.424	100	0.195	0.256
13	0.553	0.684	37	0.325	0.418	125	0.176	0.230
14	0.532	0.661	38	0.320	0.413	150	0.159	0.210
15	0.514	0.641	39	0.316	0.408	175	0.148	0.194
16	0.497	0.623	40	0.312	0.403	200	0.138	0.181
17	0.482	0.606	41	0.308	0.398	300	0.113	0.148
18	0.468	0.590	42	0.304	0.393	400	0.098	0.128
19	0.456	0.575	43	0.301	0.389	500	0.088	0.115
20	0.444	0.561	44	0.297	0.384	600	0.080	0.105
21	0.433	0.549	45	0.294	0.380	700	0.074	0.097
22	0.423	0.537	46	0.291	0.376	800	0.070	0.091
23	0.413	0.526	47	0.288	0.372	900	0.065	0.086
24	0.404	0.515	48	0.284	0.368	1000	0.062	0.081
25	0.396	0.505	49	0.281	0.364			
26	0.388	0.496	50	0.279	0.361			

LAMPIRAN Q

SERTIFIKAT ANALISIS METFORMIN HCl



19AM09000
8/03/13/0277

WANBURY

Certificate of Analysis

Product	: Metformin Hydrochloride BP/EP	Batch No.	: MT15861212
Mfg. Date	: Dec, 2012	Exp. Date	: Nov, 2017
Quantity	: 1300 Kg	No. of Containers	: 52
Art No. / Specification: KF 03			
Customer name: PT.GLOBAL CHEMINDO MEGATRADING, INDONESIA			

S. No	Test	Result	Specification
01.	Description	White Crystals	White Crystals
02.	Solubility	Freely soluble in water, slightly soluble in alcohol, practically insoluble in acetone and in methylene chloride.	Freely soluble in water, slightly soluble in alcohol, practically insoluble in acetone and in methylene chloride.
03.	Identification		
	B. IR	Positive	Concordant with Ref. Spectra obtained with Metformin Hydrochloride working standard
	E. Reaction of Chlorides	Positive	Positive
04.	Appearance of solution	Solution S is clear and colourless	Solution S (2g in 20 ml water) should be clear and colourless.
05.	Related substances (By HPLC)		
	a) Cyanoguanidine	Below quantification limit	Not more than 0.02%
	b) Other Impurity	0.03%	Not more than 0.10%
06.	Heavy metals	Less than 10 ppm	Not more than 10 ppm
07.	Loss on drying	0.23%	Not more than 0.5%
08.	Sulphated Ash	0.05%	Not more than 0.1%
09.	Assay on dry basis	99.4%	Between 98.5% and 101.0% of $C_4H_{12}ClN_5$
Additional Test:			
10	Particle size	100%	100.0% material shall passes through 20 mesh screen
11.	Residual Solvents		
	Methanol	134 ppm	Not more than 1000 ppm
	Xylene	Below Detectable Limit	Not more than 500 ppm

Remarks : The product Complies with B.P-2007/E.P 5-V[th] Edition and In house specifications.
Declaration: Product is free from animal derived materials and is manufactured from synthetic sources only.

Prepared by	Reviewed by	Approved by
Executive-QC	Dy. Manager-QC	Head - QA
Date: 31/12/12	Date: 31/12/12	Date: 31/12/12

Wanbury Limited, API Division Tanuku, Kilindalaparru - 534 217, Iragavaram Mandal, West Godavari District, Andhra Pradesh, India.
Tel: 91-8819-284 249, 284 349, Fax: 91-8819-284 350
Regd. Office : 10th Floor, B-Wing, BSEL Tech Park, Sector-30A, Opp. Vashi Railway Stn., Vashi, Navi Mumbai-400 705. (INDIA).
Tel. : 91-22-6794 2222, Fax : 91-22-6794 2111/333

PAGE : 1 OF 1

GLOBAL CHEMINDO MEGATRAD
reliable partner in raw material bu

LAMPIRAN R

SERTIFIKAT ANALISIS *LOCUST BEAN GUM*

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Locust bean gum from Ceratonia siliqua seeds

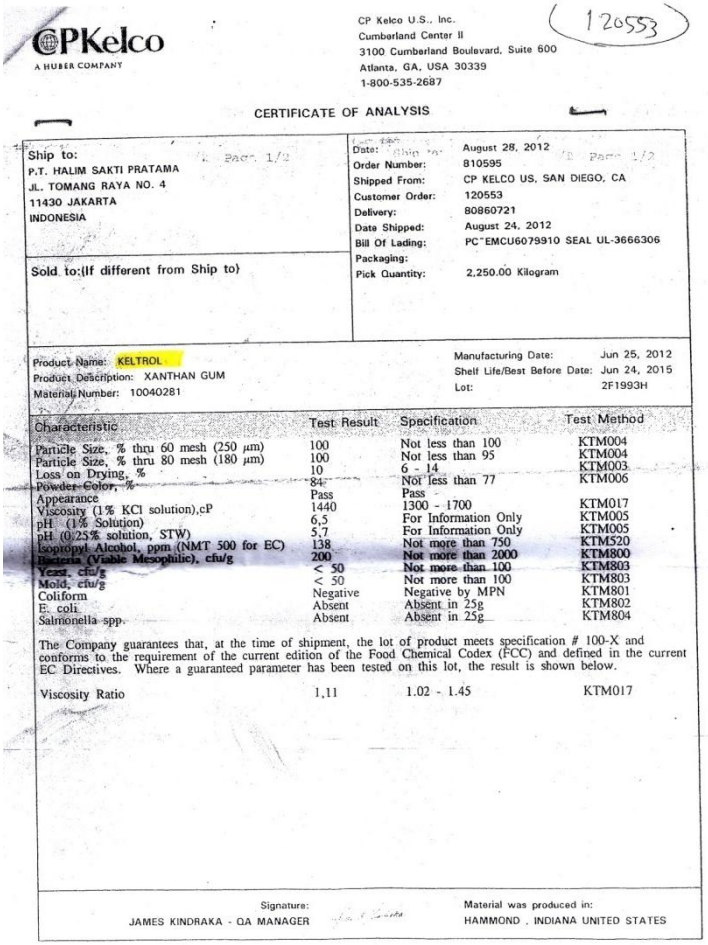
Product Number:	**G0753**
Batch Number:	**SLBD7G54V**
Brand:	SIGMA
CAS Number:	9000-40-2
MDL Number:	MFCD00131257
Quality Release Date:	29 AUG 2012

Test	Specification	Result
Appearance (Color)	Faint Yellow to Light Brown	Faint Beige
Appearance (Form)	Powder	Powder
Loss on Drying	≤ 12 %	12 %
Residue on Ignition (Ash)	≤ 1.2 %	0.9 %
Hot Viscosity 1%	2100 - 3750 cps	2775 cps
Identity	Pass	Pass

Rodney Burbach, Manager
Analytical Services
St. Louis, Missouri US

LAMPIRAN S

SERTIFIKAT ANALISIS *XANTHAN GUM*



CPKelco
A HUBER COMPANY

CP Kelco U.S., Inc.
Cumberland Center II
3100 Cumberland Boulevard, Suite 600
Atlanta, GA, USA 30339
1-800-535-2687

120553

CERTIFICATE OF ANALYSIS

Ship to:
P.T. HALIM SAKTI PRATAMA
JL. TOMANG RAYA NO. 4
11430 JAKARTA
INDONESIA

Sold to:(If different from Ship to)

Date: August 28, 2012
Order Number: 810595
Shipped From: CP KELCO US, SAN DIEGO, CA
Customer Order: 120553
Delivery: 80860721
Date Shipped: August 24, 2012
Bill Of Lading: PC"EMCU6079910 SEAL UL-3666306
Packaging:
Pick Quantity: 2,250.00 Kilogram

Product Name: KELTROL
Product Description: XANTHAN GUM
Material Number: 10040281

Manufacturing Date: Jun 25, 2012
Shelf Life/Best Before Date: Jun 24, 2015
Lot: 2F1993H

Characteristic	Test Result	Specification	Test Method
Particle Size, % thru 60 mesh (250 µm)	100	Not less than 100	KTM004
Particle Size, % thru 80 mesh (180 µm)	100	Not less than 95	KTM004
Loss on Drying, %	10	6 - 14	KTM003
Powder Color, %	84	Not less than 77	KTM006
Appearance	Pass	Pass	
Viscosity (1% KCl solution),cP	1440	1300 - 1700	KTM017
pH (1% Solution)	6,5	For Information Only	KTM005
pH (0.25% solution, STW)	5,7	For Information Only	KTM005
Isopropyl Alcohol, ppm (NMT 500 for EC)	138	Not more than 750	KTM520
Bacteria (Viable Mesophilic), cfu/g	200	Not more than 2000	KTM800
Yeast, cfu/g	< 50	Not more than 100	KTM803
Mold, cfu/g	< 50	Not more than 100	KTM803
Coliform	Negative	Negative by MPN	KTM801
E. coli	Absent	Absent in 25g	KTM802
Salmonella spp.	Absent	Absent in 25g	KTM804

The Company guarantees that, at the time of shipment, the lot of product meets specification # 100-X and conforms to the requirement of the current edition of the Food Chemical Codex (FCC) and defined in the current EC Directives. Where a guaranteed parameter has been tested on this lot, the result is shown below.

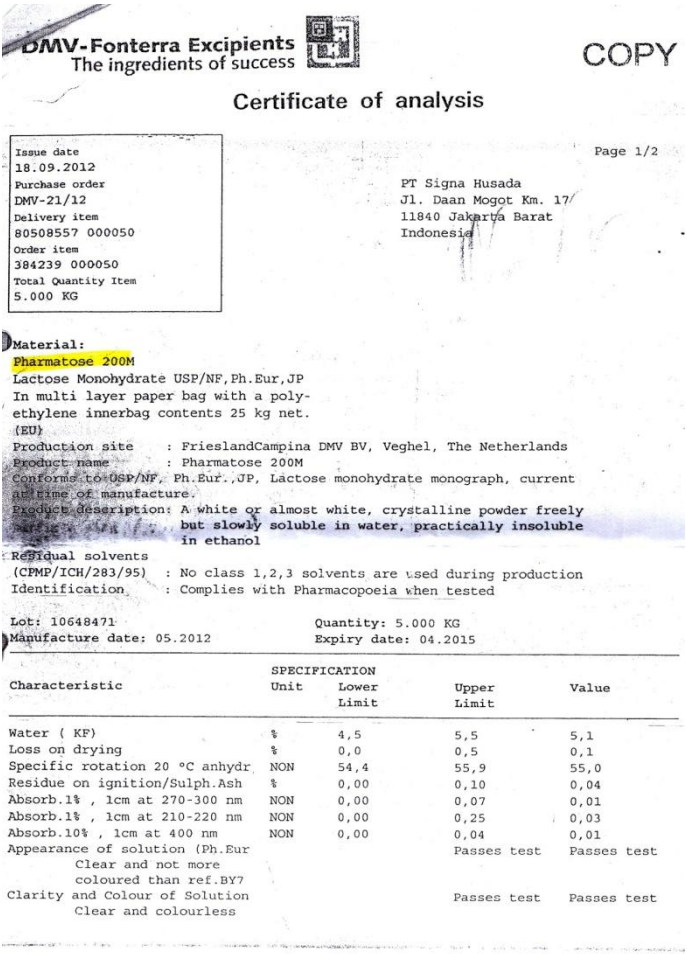
Viscosity Ratio	1,11	1.02 - 1.45	KTM017

Signature:
JAMES KINDRAKA - QA MANAGER

Material was produced in:
HAMMOND , INDIANA UNITED STATES

LAMPIRAN T

SERTIFIKAT ANALISIS LAKTOSA MONOHIDRAT



DMV-Fonterra Excipients
The ingredients of success

COPY

Certificate of analysis

Issue date
18.09.2012
Purchase order
DMV-21/12
Delivery item
80508557 000050
Order item
384239 000050
Total Quantity Item
5.000 KG

Page 1/2

PT Signa Husada
Jl. Daan Mogot Km. 17
11840 Jakarta Barat
Indonesia

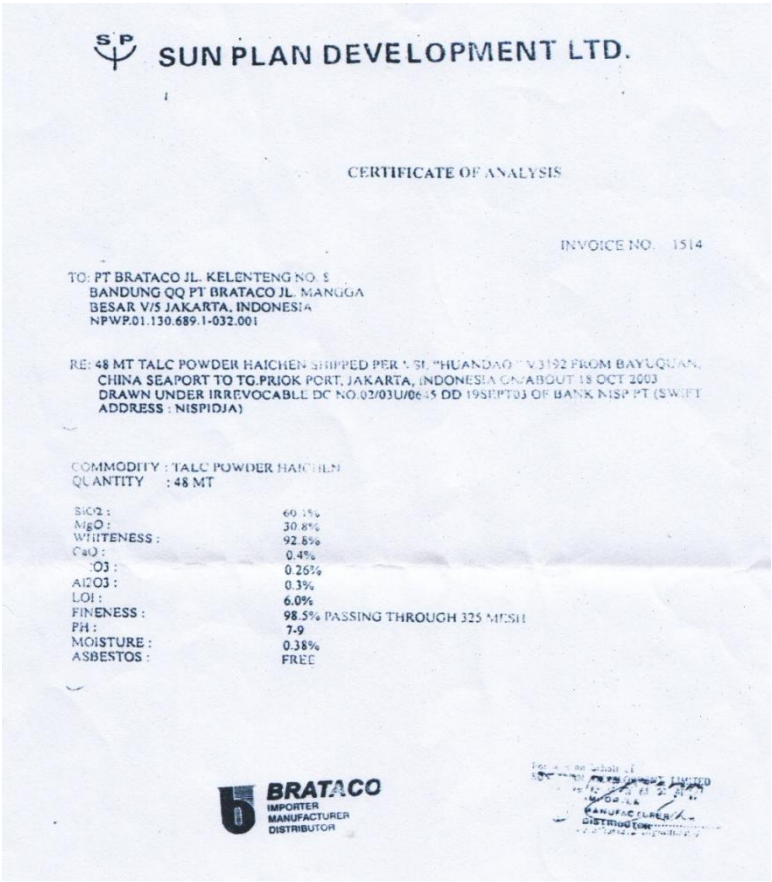
Material:
Pharmatose 200M
Lactose Monohydrate USP/NF,Ph.Eur,JP
In multi layer paper bag with a poly-
ethylene innerbag contents 25 kg net.
(EU)
Production site : FrieslandCampina DMV BV, Veghel, The Netherlands
Product name : Pharmatose 200M
Conforms to USP/NF, Ph.Eur.,JP, Lactose monohydrate monograph, current at time of manufacture.
Product description: A white or almost white, crystalline powder freely soluble in water, practically insoluble in ethanol
Residual solvents
(CPMP/ICH/283/95) : No class 1,2,3 solvents are used during production
Identification : Complies with Pharmacopoeia when tested

Lot: 10648471 Quantity: 5.000 KG
Manufacture date: 05.2012 Expiry date: 04.2015

Characteristic	SPECIFICATION Unit	Lower Limit	Upper Limit	Value
Water (KF)	%	4,5	5,5	5,1
Loss on drying	%	0,0	0,5	0,1
Specific rotation 20 °C anhydr	NON	54,4	55,9	55,0
Residue on ignition/Sulph.Ash	%	0,00	0,10	0,04
Absorb.1% , 1cm at 270-300 nm	NON	0,00	0,07	0,01
Absorb.1% , 1cm at 210-220 nm	NON	0,00	0,25	0,03
Absorb.10% , 1cm at 400 nm	NON	0,00	0,04	0,01
Appearance of solution (Ph.Eur Clear and not more coloured than ref.BY7			Passes test	Passes test
Clarity and Colour of Solution Clear and colourless			Passes test	Passes test

LAMPIRAN U

SERTIFIKAT ANALISIS MAGNESIUM STEARAT



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)

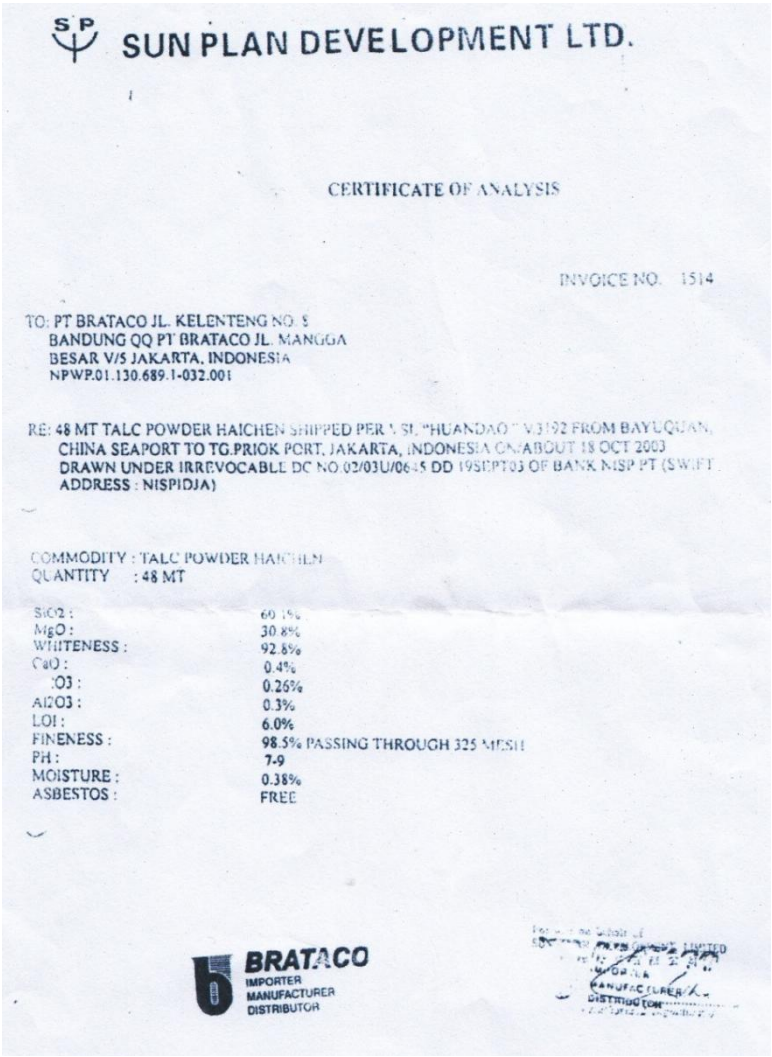
COMMODITY : TALC POWDER HAICHEN
QUANTITY : 48 MT

SiO2 :	60.1%
MgO :	30.8%
WHITENESS :	92.8%
CaO :	0.4%
FeO3 :	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 V

SERTIFIKAT ANALISIS TALK



SUN PLAN DEVELOPMENT LTD.

CERTIFICATE OF ANALYSIS

INVOICE NO. 1514

TO: PT BRATACO JL. KELENTENG NO. 9
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%
:O3 :	0.26%
AlO3 :	0.3%
LOI :	6.0%
FINENESS :	98.5% PASSING THROUGH 325 MESH
PH :	7-9
MOISTURE :	0.38%
ASBESTOS :	FREE

BRATACO
IMPORTER
MANUFACTURER
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