BAB 5
SIMPULAN

5.1. Simpulan

Dari data penelitian yang telah diinterpretasikan, dapat ditarik kesimpulan :

Konsentrasi HPMC berpengaruh signifikan terhadap peningkatan waktu hancur, peningkatan waktu basah, dan menurunkan kekerasan. Konsentrasi manitol berpengaruh signifikan terhadap penurunan kekerasan dan kerapuhan sedangkan konsentrasi crospovidone berpengaruh signifikan terhadap peningkatan waktu hancur, peningkatan waktu basah, peningkatan kekerasan dan menurunkan kerapuhan. Untuk interaksi antar faktor yang berpengaruh signifikan yaitu interaksi antara konsentrasi HPMC dan crospovidon berpengaruh pada peningkatan waktu hancur, interaksi antara konsentrasi HPMC dan manitol serta interaksi antara konsentrasi manitol dan crospovidone berpengaruh pada kerapuhan tablet ko-proses yang dihasilkan.

Hasil optimum yang diperoleh dengan program optimasi *Design Expert* yaitu formula dengan konsentrasi HPMC 0,94%, konsentrasi manitol 0,26% dan konsentrasi crospovidon 0,99% dengan prediksi untuk respon *carr's index* 19,995%, *hausner ratio* 1,2476, kerapuhan 0,489%, waktu hancur 58,9 detik, waktu basah 67,83 detik, kekerasan 2,68 kgf, dan rasio absorpsi air 154,81. Respon yang menunjukkan adanya perbedaan bermakna antara formula optimum yang dihasilkan dengan teoritis yaitu waktu hancur, waktu basah dan rasio absorpsi air.

Penambahan bahan aktif domperidone terhadap formula optimum bahan ko-proses mempengaruhi mutu fisik granul dan tablet. Semua respon memenuhi persyaratan sediaan tablet ODT kecuali waktu basah.

5.2. Alur penelitian selanjutnya

Dapat dilakukan penelitian lebih lanjut mengenai formulasi ko-proses dengan menggunakan bahan aktif selain domperidone.

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LAMPIRAN A

HASIL UJI MUTU FISIK GRANUL BAHAN KO-PROSES

Formula	Replikasi	*Carr's Index* (%)	Persyaratan (%)	*Hausner Ratio*	Persyaratan
F1	I	20,91	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,26	< 1,25 (Shervington *and* Shervington, 1998)
	II	20,98		1,26	
	III	22,99		1,29	
	Rata-rata	21,63		1,27	
	± SD	1,18		0,02	
F2	I	21,99	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,28	< 1,25 (Shervington *and* Shervington, 1998)
	II	20,99		1,27	
	III	20,99		1,27	
	Rata-rata	21,32		1,27	
	± SD	0,58		0,01	
F3	I	21,99	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,28	< 1,25 (Shervington *and* Shervington, 1998)
	II	22,10		1,28	
	III	16,99		1,2	
	Rata-rata	20,36		1,25	
	± SD	2,92		0,05	
F4	I	22,01	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,28	< 1,25 (Shervington *and* Shervington, 1998)
	II	21,09		1,26	
	III	20,00		1,25	
	Rata-rata	21,03		1,26	
	± SD	1,01		0,02	
F5	I	17,99	16-20 = cukup (Hadisoewignyo dan Fudholi, 2013)	1,21	< 1,25 (Shervington *and* Shervington, 1998)
	II	22,00		1,28	
	III	18,00		1,22	
	Rata-rata	19,33		1,24	
	± SD	2,31		0,04	
F6	I	19,97	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,25	< 1,25 (Shervington *and* Shervington, 1998)
	II	21,99		1,28	
	III	19,00		1,23	
	Rata-rata	20,32		1,25	
	± SD	1,53		0,03	
F7	I	20,99	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,26	< 1,25 (Shervington *and* Shervington, 1998)
	II	22,98		1,29	
	III	20,98		1,26	
	Rata-rata	21,65		1,27	
	± SD	1,15		0,02	
F8	I	21,00	21-25 = agak buruk (Hadisoewignyo dan Fudholi, 2013)	1,26	< 1,25 (Shervington *and* Shervington, 1998)
	II	20,00		1,25	
	III	20,00		1,25	
	Rata-rata	20,33		1,25	
	± SD	0,58		0,01	

HASIL UJI KELEMBAPAN GRANUL BAHAN KO-PROSES

Formula	Kelembapan (%)								Persyaratan
	F1	F2	F3	F4	F5	F6	F7	F8	
Replikasi I	4,85	3,99	2,13	3,67	3,27	2,87	2,61	2,17	2-5% (Ansel, 1989)
Replikasi II	2,86	4,59	3,08	2,25	2,65	2,04	4,38	3,59	
Replikasi III	3,15	3,36	4,25	4,52	2,76	2,61	2,37	3,27	
Rata-rata ± SD	3,62 ± 0,011	3,98 ± 0,006	3,15 ± 0,011	3,48 ± 0,011	2,89 ± 0,003	2,31 ± 0,005	3,12 ± 0,011	3,01 ± 0,007	

LAMPIRAN B

HASIL UJI KEKERASAN TABLET KO-PROSES

REPLIKASI I

No	Kekerasan Tablet Ko-proses (kgf)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	2,0	1,8	2,8	3,4	2,0	2,3	2,3	2,8
2	4,0	1,9	3,7	2,5	2,5	2,0	2,6	2,6
3	2,3	3,3	2,8	3,3	2,4	0,9	3,2	2,0
4	2,7	3,1	3,1	1,9	3,6	1,9	3,3	3,0
5	2,5	3,3	2,9	3,6	3,5	3,6	2,2	1,7
6	2,2	1,8	3,5	4,0	2,4	1,7	3,2	3,0
7	2,2	3,8	3,7	3,2	3,2	2,1	1,9	3,3
8	3,7	2,7	2,0	2,8	3,1	1,2	4,4	2,2
9	2,5	2,8	4,0	2,2	2,1	3,9	1,8	3,2
10	2,9	2,8	2,1	3,1	4,0	2,3	2,3	3,3
Rata-rata	2,7	2,7	3,1	3,0	2,9	2,2	2,7	2,7
±	±	±	±	±	±	±	±	±
SD	0,66	0,70	0,68	0,65	0,69	0,94	0,80	0,57
KV	24,44	25,93	21,94	21,67	23,79	42,73	29,63	21,11

REPLIKASI II

No	Kekerasan Tablet Ko-proses (kgf)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	4,0	2,6	2,8	2,8	3,2	2,7	1,8	2,8
2	2,8	3,0	3,6	2,2	3,1	2,2	3,3	2,9
3	2,1	2,4	3,7	2,4	2,5	2,1	2,3	2,8
4	3,1	3,4	2,8	2,6	2,5	1,7	3,0	2,9
5	3,3	2,3	4,0	3,3	1,9	2,2	2,3	3,1
6	3,1	2,9	3,2	2,9	2,5	2,5	1,9	2,0
7	2,0	2,2	2,7	2,4	3,1	2,5	2,3	3,5
8	2,5	2,8	2,2	2,7	3,1	2,2	2,1	2,6
9	4,0	3,2	3,9	2,8	3,0	1,9	2,8	3,0
10	3,8	2,5	2,7	2,5	1,9	2,0	2,8	2,3
Rata-rata	3,1	2,7	3,2	2,7	2,7	2,2	2,5	2,8
±	±	±	±	±	±	±	±	±
SD	0,73	0,40	0,61	0,31	0,50	0,30	0,49	0,42
KV	23,55	14,81	19,06	11,48	18,52	13,64	19,60	15,00

REPLIKASI III

No	Kekerasan Tablet Ko-proses (kgf)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	3,6	1,8	4,0	1,9	2,3	2,3	2,0	3,8
2	3,4	2,4	3,9	2,3	2,8	2,0	1,7	2,8
3	2,9	2,7	2,6	1,7	2,2	2,2	3,1	2,0
4	2,2	1,7	3,4	1,9	2,1	2,1	3,2	1,9
5	2,6	2,9	2,1	1,9	3,9	2,5	2,0	2,0
6	3,2	2,0	2,8	2,5	2,2	3,1	2,8	2,7
7	3,5	2,4	3,4	2,7	2,3	2,0	2,4	2,1
8	2,3	3,0	3,6	1,9	2,5	2,1	1,9	3,2
9	2,6	1,9	2,8	2,6	2,5	2,7	2,6	2,3
10	3,3	2,6	3,4	2,0	2,4	2,3	3,4	2,5
Rata-rata	3,0	2,3	3,20	2,1	2,5	2,3	2,5	2,5
±	±	±	±	±	±	±	±	±
SD	0,51	0,47	0,61	0,35	0,52	0,35	0,74	0,61
KV	17,00	20,43	19,06	16,67	20,8	15,22	29,6	24,4

LAMPIRAN C

HASIL UJI KERAPUHAN TABLET KO-PROSES

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
F1	I	1,8549	1,8423	0,68	0,71 ± 0,0003	0,04
	II	1,8074	1,7942	0,73		
	III	1,9264	1,9126	0,72		
F2	I	1,841	1,8269	0,77	0,50 ± 0,0025	0,50
	II	1,9659	1,9606	0,27		
	III	1,9287	1,9198	0,46		
F3	I	1,9902	1,9715	0,94	0,82 ± 0,0012	0,16
	II	1,8040	1,7892	0,82		
	III	1,8508	1,8377	0,71		
F4	I	1,8380	1,8262	0,64	0,64 ± 0,0000	0,00
	II	1,8218	1,8102	0,64		
	III	1,7710	1,7598	0,63		
F5	I	1,8569	1,8418	0,81	0,76 ± 0,0006	0,08
	II	1,9344	1,9196	0,77		
	III	1,7003	1,6884	0,70		
F6	I	1,8610	1,8463	0,79	0,74 ± 0,0006	0,08
	II	1,8857	1,8714	0,76		
	III	1,8063	1,7942	0,67		
F7	I	2,0157	2,0115	0,21	0,14 ± 0,0007	0,50
	II	2,0643	2,0614	0,14		
	III	1,9438	1,9425	0,07		
F8	I	1,9032	1,8928	0,55	0,33 ± 0,0023	0,70
	II	1,9804	1,9733	0,36		
	III	1,6850	1,6835	0,09		

LAMPIRAN D

HASIL UJI WAKTU HANCUR TABLET KO-PROSES

REPLIKASI I

No	Waktu Hancur Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	8	57	13	4	21	4	25	75
2	6	68	11	6	63	7	30	31
3	8	52	20	6	71	6	12	61
4	6	73	10	6	43	7	10	68
5	7	53	35	7	66	5	12	34
Rata-rata	7,0	60,6	17,8	5,8	52,8	5,8	17,8	53,8
±	±	±	±	±	±	±	±	±
SD	1,00	9,40	10,38	1,10	20,72	1,30	9,07	20,09
KV	14,29	15,51	58,31	18,97	39,24	22,41	50,96	37,34

REPLIKASI II

No	Waktu Hancur Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	9	13	8	4	69	49	23	36
2	10	12	9	3	75	34	18	85
3	13	25	8	4	84	58	15	26
4	9	16	7	3	64	53	15	47
5	4	13	6	3	96	47	15	59
Rata-rata	9,0	15,8	7,6	3,4	77,6	48,2	17,2	50,6
±	±	±	±	±	±	±	±	±
SD	3,24	5,36	1,14	0,55	12,70	8,98	3,49	22,83
KV	36,00	33,92	15,00	16,18	16,37	18,63	20,29	45,12

REPLIKASI III

No	Waktu Hancur Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	7	26	9	3	56	11	8	34
2	10	19	11	5	63	9	10	63
3	8	25	10	2	67	11	14	25
4	9	15	11	3	61	13	10	125
5	10	16	11	4	93	8	12	83
Rata-rata	8,8	20,2	10,4	3,4	68	10,4	10,8	66,0
±	±	±	±	±	±	±	±	±
SD	1,30	5,07	0,89	1,14	14,53	1,95	2,28	40,26
KV	14,77	25,01	8,56	20,45	21,37	18,75	21,11	61

LAMPIRAN E

HASIL UJI WAKTU PEMBASAHAN TABLET KO-PROSES

REPLIKASI I

No	Waktu Pembasahan Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	8	72	8	11	58	8	24	25
2	10	86	23	5	74	23	72	66
3	19	78	12	13	57	8	30	43
4	7	99	9	10	43	42	84	25
5	8	127	9	11	40	37	37	130
Rata-rata	10,4	92,4	12,2	10,0	54,4	23,6	49,4	57,8
±	±	±	±	±	±	±	±	±
SD	4,93	21,82	6,22	3,00	13,61	15,85	26,85	43,73
KV	47,40	23,61	50,98	30	25,02	67,16	54,35	75,66

REPLIKASI II

No	Waktu Pembasahan Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	5	16	8	5	124	51	35	27
2	8	14	3	7	78	85	21	58
3	30	30	23	6	92	125	31	81
4	34	35	3	8	137	78	11	83
5	15	31	4	7	141	53	124	71
Rata-rata	18,4	25,2	8,2	6,6	114,4	78,4	44,4	64,0
±	±	±	±	±	±	±	±	±
SD	13,01	9,52	8,53	1,14	28,01	30,05	45,46	22,93
KV	70,71	37,78	104,02	17,27	24,48	38,33	102,39	35,83

REPLIKASI III

No	Waktu Pembasahan Tablet Ko-proses (detik)							
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
1	9	3	39	5	51	26	30	43
2	17	20	18	8	100	21	45	58
3	10	72	7	6	111	38	9	19
4	27	43	21	5	38	28	9	125
5	18	63	14	9	35	25	99	93
Rata-rata	16,2	40,2	19,8	6,6	67,0	27,6	38,4	67,6
±	±	±	±	±	±	±	±	±
SD	7,26	28,86	11,95	1,82	35,87	6,35	37,13	41,83
KV	44,81	71,79	60,35	27,57	53,54	23,01	96,69	61,88

LAMPIRAN F

HASIL UJI RASIO ABSORPSI AIR TABLET KO-PROSES

REPLIKASI I

Formula	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
F1	80	240	200	144 ± 32,86	22,82
	100	220	120		
	100	220	120		
	100	240	140		
	100	240	140		
F2	100	220	120	136 ± 15,17	11,15
	80	200	150		
	80	200	150		
	100	240	140		
	100	220	120		
F3	100	220	120	148 ± 27,52	18,59
	80	220	175		
	80	220	175		
	80	200	150		
	100	220	120		
F4	100	300	200	175 ± 25,98	14,85
	80	220	175		
	80	240	200		
	100	260	160		
	100	240	140		
F5	80	240	200	160 ± 31,62	19,76
	100	280	180		
	100	260	160		
	100	240	140		
	100	220	120		
F6	100	240	140	143 ± 19,87	13,90
	100	240	140		
	100	240	140		
	100	220	120		
	80	220	175		
F7	100	280	180	145 ± 32,02	22,08
	100	260	160		
	100	260	160		
	100	200	100		
	80	180	125		
F8	100	240	140	156 ± 26,08	16,72
	100	240	140		
	100	260	160		
	80	240	200		
	100	240	140		

REPLIKASI II

Formula	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
F1	100	200	100	126 ± 19,49	15,47
	80	200	150		
	100	240	140		
	100	220	120		
	100	220	120		
F2	100	220	120	148 ± 30,33	20,49
	100	240	140		
	80	240	200		
	100	240	140		
	100	240	140		
F3	100	220	120	115 ± 36,40	31,65
	100	200	100		
	80	220	175		
	100	180	80		
	100	200	100		
F4	80	220	175	169 ± 47,75	28,25
	100	240	140		
	80	280	250		
	100	240	140		
	100	240	140		
F5	80	200	150	131 ± 13,42	10,24
	100	220	120		
	80	180	125		
	100	240	140		
	100	220	120		
F6	100	240	140	132 ± 36,33	27,52
	100	280	180		
	100	240	140		
	100	180	80		
	100	220	120		
F7	100	320	220	196 ± 26,08	13,31
	100	280	180		
	100	320	220		
	100	300	200		
	100	260	160		
F8	100	280	180	180 ± 14,14	7,86
	100	300	200		
	100	280	180		
	100	280	180		
	100	260	160		

REPLIKASI III

Formula	Wb (gram)	Wa (gram)	Rasio	Rata-rata ± SD	KV
	80	240	200		
	100	260	160	164	
F1	100	280	180	±	18,09
	100	260	160	29,66	
	100	220	120		
	100	200	100		
	100	260	160	156	
F2	100	280	180	±	21,06
	100	280	180	32,86	
	100	260	160		
	100	220	120		
	80	180	125	129	
F3	80	180	125	±	9,26
	80	200	150	11,94	
	80	180	125		
	100	240	140		
	80	220	175	144	
F4	100	260	160	±	16,17
	80	180	125	23,29	
	100	220	120		
	100	240	140		
	100	260	160	148	
F5	80	220	175	±	13,22
	100	240	140	19,56	
	80	180	125		
	80	220	175		
	100	200	100	142	
F6	80	220	175	±	23,44
	100	240	140	33,28	
	100	220	120		
	80	240	200		
	100	260	160	155	
F7	80	220	175	±	22,58
	100	220	120	35,00	
	100	220	120		
	80	220	175		
	80	240	200	144	
F8	100	200	100	±	28,99
	100	220	120	41,74	
	80	180	125		

LAMPIRAN G

HASIL UJI MUTU FISIK GRANUL KO-PROSES OPTIMUM

Formula	Replikasi	*Carr's Index* (%)	Persyaratan (%)	*Hausner Ratio*	Persyaratan
Formula Optimum	I	20	16-20 = cukup (Hadisoewignyo dan Fudholi, 2013)	1,25	< 1,25 (Shervington *and* Shervington, 1998)
	II	19		1,23	
	III	20		1,25	
	Rata-rata	19		1,24	
	± SD	0,01		0,01	

LAMPIRAN H

HASIL UJI KEKERASAN TABLET KO-PROSES OPTIMUM

No	Kekerasan Tablet Ko-proses Optimum (kgf)		
	Replikasi I	**Replikasi II**	**Replikasi III**
1	2,5	2,7	2,9
2	3,1	2,6	2,6
3	2,0	2,4	2,5
4	2,9	2,2	2,8
5	2,3	2,6	2,2
6	3,7	2,8	2,3
7	2,2	2,2	2,3
8	2,8	2,4	3,3
9	2,8	2,6	3,1
10	2,2	3,3	2,2
Rata-rata	2,65	2,58	2,62
$\pm$ SD	0,51	0,32	0,39
KV	19,25	12,40	14,89

LAMPIRAN I

HASIL UJI KERAPUHAN TABLET KO-PROSES OPTIMUM

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
Formula Optimum	I	1,8731	1,8637	0,50	0,50 ± 0,03	6,00
	I	1,8596	1,8509	0,47		
	I	1,832	1,8224	0,52		
	II	1,8924	1,8848	0,40	0,45 ± 0,07	15,56
	II	1,8249	1,8153	0,53		
	II	1,9037	1,8958	0,41		
	III	1,7982	1,7924	0,32	0,50 ± 0,15	30
	III	1,905	1,8939	0,58		
	III	1,8671	1,8562	0,58		

KESERAGAMAN BOBOT TABLET KO-PROSES OPTIMUM

REPLIKASI 1

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	92	0,89	11	86	7,35
2	97	4,50	12	88,2	4,98
3	91,9	1,00	13	95,1	2,45
4	102	9,88	14	98	5,58
5	84,7	8,75	15	83,9	9,61
6	88	5,20	16	90,3	2,72
7	93,2	0,40	17	97,6	5,14
8	84,3	9,18	18	98,5	6,11
9	90,8	2,18	19	95,6	2,99
10	101,2	9,02	20	98,2	5,79

Rata-rata ± SD = 92,8 ± 5,70

REPLIKASI 2

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	99,1	4,80	11	94,1	0,49
2	97,2	2,79	12	88,8	6,10
3	84,5	10,64	13	95,8	1,31
4	97,3	2,89	14	98,8	4,48
5	100,4	6,17	15	88,3	6,63
6	94,3	0,28	16	95,7	1,20
7	92,4	2,29	17	96,4	1,94
8	93,9	0,70	18	91,6	3,14
9	97,6	3,21	19	96,1	1,62
10	97,1	2,68	20	91,9	2,82

Rata-rata ± SD = 94,6 ± 4,01

REPLIKASI 3

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	89,3	0,33	11	91,8	2,46
2	92	2,68	12	86,2	3,79
3	87,6	2,23	13	88,3	1,45
4	89,4	0,22	14	92,1	2,79
5	90,2	0,67	15	91,2	1,79
6	91,5	2,12	16	88,1	1,67
7	89,5	0,11	17	86,6	3,35
8	89,2	0,45	18	89	0,67
9	89,4	0,22	19	89,6	0,00
10	91,1	1,67	20	89,9	0,33

Rata-rata ± SD = 89,6 ± 1,70

LAMPIRAN J

HASIL UJI WAKTU HANCUR TABLET KO-PROSES OPTIMUM

No	Waktu Hancur Tablet Ko-proses Optimum (detik)		
	Replikasi I	Replikasi II	Replikasi III
1	14	16	35
2	24	20	11
3	24	17	17
4	37	13	30
5	26	22	20
Rata-rata	25	17,6	22,6
± SD	± 8,19	± 3,51	± 9,76
KV	32,76	19,94	43,19

LAMPIRAN K

HASIL UJI WAKTU PEMBASAHAN TABLET KO-PROSES OPTIMUM

No	Waktu Pembasahan Tablet Ko-proses Optimum (detik)		
	Replikasi I	Replikasi II	Replikasi III
1	30	31	25
2	22	48	44
3	57	54	31
4	46	58	50
5	40	52	48
Rata-rata	39,0	48,6	39,6
± SD	± 13,64	± 10,48	± 11,01
KV	34,97	21,56	27,80

LAMPIRAN L

HASIL UJI RASIO ABSORPSI AIR TABLET KO-PROSES OPTIMUM

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Replikasi I	100	265,4	165,40	164,18 ± 11,67	7,11
	100,5	256,5	155,22		
	94,3	263,4	179,32		
	89,6	242,5	170,65		
	94,6	236,8	150,32		
Replikasi II	93,4	253,4	171,31	165,81 ± 9,48	5,72
	95,0	245,7	158,63		
	95,7	249,2	160,40		
	94,4	244,3	158,79		
	91,7	256,7	179,94		
Replikasi III	84,5	224,8	166,04	166,79 ± 14,85	8,90
	92,8	226,8	144,40		
	80,7	229,9	184,88		
	81,4	215,6	164,87		
	80,5	220,4	173,79		

LAMPIRAN M

HASIL UJI MUTU FISIK GRANUL ODT DOMPERIDONE

Formula	Replikasi	*Carr's Index* (%)	Persyaratan (%)	*Hausner Ratio*	Persyaratan
Formula Optimum	I	17	11-15 = baik	1,20	< 1,25 (Shervington *and* Shervington, 1998)
	II	16	16-20 = cukup	1,19	
	III	14	(Hadisoewignyo dan Fudholi, 2013)	1,16	
	Rata-rata ± SD	15,67 ± 1,53		1,19 ± 0,02	

LAMPIRAN N

HASIL UJI KESERAGAMAN SEDIAAN TABLET ODT DOMPERIDONE

REPLIKASI 1

No	Keseragaman Sediaan Tablet ODT Domperidone Replikasi I			
	Abs	Csampel	$W_{Domperidone}$ yang diperoleh	Keseragaman Sediaan
1	0,242	7,71	9,64	96,88
2	0,237	7,53	9,41	94,57
3	0,214	6,73	8,41	84,52
4	0,226	7,15	8,94	89,85
5	0,219	6,91	8,64	86,83
6	0,223	7,04	8,80	88,44
7	0,218	6,87	8,59	86,33
8	0,227	7,18	9,00	90,45
9	0,241	7,67	9,59	96,38
10	0,235	7,46	9,33	93,77
			Rata-rata	90,80
			± SD	± 4,38
			KV	4,82%

REPLIKASI 2

No	Keseragaman Sediaan Tablet ODT Domperidone Replikasi II			
	Abs	Csampel	$W_{Domperidone}$ yang diperoleh	Keseragaman Sediaan
1	0,251	8,02	10,03	100,91
2	0,230	7,29	9,11	91,65
3	0,237	7,53	9,41	94,67
4	0,243	7,74	9,68	97,38
5	0,232	7,36	9,2	92,56
6	0,246	7,85	9,81	98,69
7	0,228	7,22	9,03	90,85
8	0,234	7,43	9,29	93,46
9	0,247	7,88	9,85	99,09
10	0,231	7,32	9,15	92,05
			Rata-rata	95,13
			± SD	± 3,59
			KV	3,78%

REPLIKASI 3

No	Keseragaman Sediaan Tablet ODT Domperidone Replikasi III			
	Abs	Csampel	$W_{Domperidone}$ yang diperoleh	Keseragaman Sediaan
1	0,239	7,60	9,5	90,82
2	0,246	7,85	9,81	93,79
3	0,267	8,58	10,73	102,58
4	0,256	8,19	10,24	97,90
5	0,273	8,79	10,99	105,07
6	0,244	7,78	9,73	93,02
7	0,262	8,4	10,5	100,38
8	0,253	8,09	10,11	96,65
9	0,270	8,68	10,85	103,73
10	0,268	8,61	10,76	102,87
			Rata-rata	98,68
			± SD	± 4,99
			KV	5,06%

KESERAGAMAN BOBOT TABLET ODT DOMPERIDONE

REPLIKASI 1

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	104,8	0,86	11	102,2	1,65
2	98,6	5,11	12	108,2	4,13
3	97,9	5,78	13	102,7	1,16
4	108,0	3,94	14	104,7	0,76
5	101,0	2,80	15	103,5	0,39
6	106,2	2,20	16	106,1	2,11
7	107,1	3,07	17	101,9	1,93
8	102,3	1,55	18	107,4	3,36
9	99,4	4,34	19	107,7	3,65
10	102,3	1,55	20	106,2	2,20

Rata-rata ± SD = 103,91 ± 3,21

REPLIKASI 2

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	108,4	3,16	11	107,3	2,12
2	106,6	1,45	12	106,3	1,17
3	106,3	1,17	13	99,2	5,59
4	106,5	1,36	14	108,8	3,55
5	103,8	1,21	15	102,7	2,26
6	108,0	2,78	16	106,5	1,36
7	101,4	3,50	17	102,8	2,17
8	107,7	2,50	18	105,5	0,40
9	107,4	2,21	19	96,4	8,26
10	104,0	1,02	20	105,9	0,79

Rata-rata ± SD = 105,08 ± 3,23

REPLIKASI 3

No.	Bobot tablet (mg)	Penyimpangan (%)	No.	Bobot tablet (mg)	Penyimpangan (%)
1	109,6	1,62	11	113,3	1,70
2	111,9	0,44	12	109,6	1,62
3	111,4	0,00	13	113,2	1,61
4	110,4	0,90	14	114,0	2,33
5	110,3	0,99	15	112,8	1,25
6	111,8	0,35	16	111,8	0,35
7	116,4	4,48	17	113,9	2,24
8	110,5	0,81	18	111,8	0,35
9	107,7	3,33	19	114,5	2,78
10	100,0	10,24	20	113,2	1,61

Rata-rata ± SD = 111,41 ± 3,35

LAMPIRAN O

HASIL UJI KEKERASAN TABLET ODT DOMPERIDONE

No	Kekerasan Tablet ODT Domperidone (kgf)		
	Replikasi I	Replikasi II	Replikasi III
1	2,0	2,3	3,3
2	2,4	2,5	1,9
3	2,5	2,0	2,2
4	2,1	2,2	2,2
5	1,9	1,9	3,6
6	2,6	2,3	2,3
7	2,2	1,8	2,7
8	3,4	3,0	2,7
9	1,9	2,2	3,1
10	3,0	2,4	2,3
Rata-rata	2,40	2,26	2,63
± SD	± 0,49	± 0,34	± 0,55
KV	20.42	15,04	20,91

LAMPIRAN P

HASIL UJI KERAPUHAN TABLET ODT DOMPERIDONE

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
Formula Optimum	I	2,078	2,0682	0,472	0,46 ± 0,09	19,56
	I	2,0847	2,0733	0,547		
	I	2,1356	2,1278	0,365		
	II	2,0942	2,0836	0,506	0,42 ± 0,10	23,81
	II	2,1163	2,1097	0,312		
	II	2,1028	2,0936	0,438		
	III	2,2289	2,2187	0,458	0,48 ± 0,13	27,08
	III	2,1957	2,1878	0,360		
	III	2,1565	2,1432	0,617		

LAMPIRAN Q

HASIL UJI WAKTU HANCUR TABLET ODT DOMPERIDONE

No	Waktu Hancur Tablet ODT Domperidone (detik)		
	Replikasi I	Replikasi II	Replikasi III
1	34	41	41
2	33	44	54
3	37	44	48
4	31	41	50
5	34	43	57
Rata-rata	33,8	42,6	50,0
± SD	± 2,17	± 1,52	± 6,12
KV	6,42	3,57	12,24

LAMPIRAN R

HASIL UJI WAKTU PEMBASAHAN TABLET ODT DOMPERIDONE

No	Waktu Pembasahan Tablet ODT Domperidone (detik)		
	Replikasi I	Replikasi II	Replikasi III
1	108	78	105
2	102	98	109
3	110	106	117
4	117	99	114
5	92	113	119
Rata-rata	105,8	98,8	112,8
± SD	± 9,39	± 13,10	± 5,76
KV	8,88	13,26	5,11

LAMPIRAN S

HASIL UJI RASIO ABSORPSI AIR TABLET ODT DOMPERIDONE

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Replikasi I	102,5	269,0	169,44	159,3 ± 6,2	3,89
	105,2	266,8	153,61		
	100,3	263,5	162,71		
	105,2	264,9	151,81		
	98,0	260,6	165,92		
Replikasi II	100,8	261,2	159,13	155,53 ± 9,74	6,26
	102,2	270,2	164,38		
	105,0	254,1	142		
	103,0	271,2	163,30		
	103,8	258,3	148,84		
Replikasi III	105,3	256,4	143,50	147,85 ± 17,53	11,86
	106,2	273,6	157,63		
	105,2	286,8	172,62		
	108,5	247,4	128,02		
	108,8	258,4	137,5		

LAMPIRAN T

HASIL UJI KEKERASAN TABLET KO-PROSES OPTIMUM SETELAH STABILITAS

No	Kekerasan Tablet Ko-proses Optimum Setelah Stabilitas (kgf)		
	Replikasi I	Replikasi II	Replikasi III
1	2,5	2,6	3,2
2	2,8	2,7	1,9
3	1,7	1,6	2,8
4	2,8	2,6	2,5
5	2,7	2,5	1,7
6	3,1	3,5	2,4
7	2,3	2,1	2,3
8	2,5	1,9	2,2
9	2,9	2,8	2,7
10	1,8	2,5	2,7
Rata-rata	2,51	2,48	2,44
± SD	± 0,46	± 0,52	± 0,44
KV	18,33	20,97	18,03

LAMPIRAN U

HASIL UJI KERAPUHAN TABLET KO-PROSES OPTIMUM SETELAH STABILITAS

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
Formula Optimum	I	1,8867	1,8782	0,45	0,46 ± 0,06	13,04
	I	1,8574	1,8476	0,53		
	I	1,9048	1,8971	0,40		
	II	1,6293	1,6248	0,28	0,52 ± 0,22	42,31
	II	1,8238	1,8113	0,69		
	II	1,8574	1,8462	0,60		
	III	1,8716	1,8705	0,06	0,50 ± 0,39	78
	III	1,8359	1,8214	0,79		
	III	1,9182	1,9057	0,65		

LAMPIRAN V

HASIL UJI WAKTU HANCUR TABLET KO-PROSES OPTIMUM SETELAH STABILITAS

No	Waktu Hancur Tablet Ko-Proses Optimum Setelah Stabilitas (detik)		
	Replikasi I	**Replikasi II**	**Replikasi III**
1	25	16	33
2	28	13	38
3	15	18	35
4	18	12	13
5	21	17	12
Rata-rata	21,4	15,2	26,2
± SD	± 5,22	± 2,59	± 12,64
KV	24,39	0,17	48,24

LAMPIRAN W

HASIL UJI WAKTU BASAH TABLET KO-PROSES OPTIMUM SETELAH STABILITAS

No	Waktu Basah Tablet Ko-Proses Optimum Setelah Stabilitas (detik)		
	Replikasi I	**Replikasi II**	**Replikasi III**
1	16	43	21
2	42	31	26
3	26	37	38
4	21	32	23
5	12	45	28
Rata-rata	23,4	37,6	27,2
± SD	± 11,65	± 6,31	± 6,61
KV	49,79	16,78	24,30

LAMPIRAN X

HASIL UJI RASIO ABSORPSI AIR TABLET KO-PROSES OPTIMUM SETELAH STABILITAS

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Replikasi I	96,10	260,7	171,28	177,7 ± 18,34	10,32
	102,0	264,3	159,12		
	95,30	241,6	153,32		
	98,80	252,1	155,16		
	92,60	226,6	144,71		
Replikasi II	99,70	297,7	198,60	156,76 ± 9,68	6,18
	93,80	232,8	148,19		
	89,70	253,8	182,94		
	97,00	269,4	177,73		
	91,70	257,7	181,03		
Replikasi III	87,40	252,0	188,33	176,82 ± 6,70	3,79
	87,30	240,6	175,60		
	82,90	225,3	171,77		
	82,20	223,9	172,38		
	81,30	224,4	176,01		

LAMPIRAN Y

HASIL UJI KEKERASAN TABLET ODT DOMPERIDONE SETELAH STABILITAS

No	Kekerasan Tablet ODT Domperidone Setelah Stabilitas (kgf)		
	Replikasi I	Replikasi II	Replikasi III
1	2,8	2,2	1,7
2	2,1	1,7	2,5
3	1,9	2,2	3,3
4	2,2	2,0	1,8
5	2,3	1,8	3,4
6	2,7	3,7	2,1
7	3,0	1,8	2,2
8	2,4	2,0	2,9
9	3,7	3,5	2,8
10	1,7	2,3	2,7
Rata-rata	2,48	2,32	2,54
± SD	± 0,59	± 0,70	± 0,59
KV	23,79	30,17	23,23

LAMPIRAN Z

HASIL UJI KERAPUHAN TABLET ODT DOMPERIDONE SETELAH STABILITAS

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
Formula Optimum	I	2,0515	2,0418	0,47	0,52 ± 0,05	9,62
	I	2,0982	2,0871	0,53		
	I	2,1467	2,1344	0,57		
	II	2,2700	2,2139	0,59	0,48 ± 0,10	20,83
	II	2,1829	2,1734	0,44		
	II	2,1986	2,1895	0,41		
	III	2,1410	2,1282	0,60	0,49 ± 0,11	22,45
	III	2,0874	2,0795	0,38		
	III	2,0988	2,0886	0,49		

LAMPIRAN AA

HASIL UJI WAKTU HANCUR TABLET ODT DOMPERIDONE SETELAH STABILITAS

No	Waktu Hancur Tablet ODT Domperidone Setelah Stabilitas (detik)		
	Replikasi I	**Replikasi II**	**Replikasi III**
1	34	44	49
2	41	47	26
3	28	48	31
4	42	59	25
5	38	41	36
Rata-rata	36,6	47,8	33,4
± SD	± 5,73	± 6,83	± 9,76
KV	15,66	14,29	29,22

LAMPIRAN AB

HASIL UJI WAKTU BASAH TABLET ODT DOMPERIDONE SETELAH STABILITAS

No	Waktu Basah Tablet ODT Domperidone Setelah Stabilitas (detik)		
	Replikasi I	Replikasi II	Replikasi III
1	110	77	95
2	104	79	97
3	95	81	113
4	113	92	104
5	101	77	101
Rata-rata	104,6	81,2	102
± SD	± 7,16	± 6,26	± 7,07
KV	6,85	7,71	6,93

LAMPIRAN AC

HASIL UJI RASIO ABSORPSI AIR TABLET ODT DOMPERIDONE SETELAH STABILITAS

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Replikasi I	108,8	289,0	165,63	161,26 ± 6,23	3,86
	101,7	259,5	155,16		
	105,7	268,5	154,02		
	100,3	264,8	164,01		
	103,1	275,8	167,51		
Replikasi II	104,0	272,8	162,31	160,89 ± 5,88	3,65
	104,0	279,2	168,46		
	104,0	266,6	156,35		
	106,8	281,5	163,58		
	106,6	270,5	153,75		
Replikasi III	106,8	276,4	158,80	153,5 ± 10,19	6,64
	111,2	283,8	155,22		
	107,1	285,0	166,11		
	113,0	270,8	139,65		
	110,2	273,0	147,73		

LAMPIRAN AD

HASIL UJI PENETAPAN KADAR TABLET ODT DOMPERIDONE

Formula	W rata-rata (mg)	W sampel (mg)	Abs	C sampel (ppm)	Wd teoritis (mg)	Wd didapat (mg)	% kadar	Rata-rata ± SD	KV
I	104,6	100,4	0,241	7,67	9,59	9,99	99,90	99,8 ± 0,75	0,75
	103,26	100,8	0,246	7,85	9,81	10,05	100,5		
	102,09	100,7	0,245	7,81	9,76	9,90	99,00		
II	104,17	100,9	0,246	7,85	9,81	10,13	101,3	99,4 ± 1,65	1,66
	103,87	101,2	0,241	7,67	9,59	9,84	98,40		
	109,3	100,5	0,244	7,78	9,73	9,85	98,50		
III	104,98	101,1	0,251	8,02	10,025	10,41	104,1	104,6 ± 1,17	1,12
	102,71	100,6	0,254	8,13	10,156	10,37	103,7		
	104,3	100,8	0,256	8,19	10,24	10,59	105,9		
Pembanding Generik	109	100,2	0,231	7,32	10	9,15	99,5	99,3 ± 0,68	0,69
	108,3	100,8	0,234	7,43	10	9,29	99,8		
	109,3	100,5	0,229	7,25	10	9,06	98,5		
Pembanding Paten	104	100,6	0,236	7,50	10	9,38	97,0	98,86 ± 1,887	1,91
	107,3	100,8	0,235	7,46	10	9,33	99,3		
	106,3	100,2	0,238	7,57	10	9,46	100,4		

LAMPIRAN AE

HASIL UJI DISOLUSI TABLET ODT DOMPERIDONE

BATCH 1
(Replikasi 1)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,231	7,32	6,59	66,04	3,30
2	0,239	7,60	6,84	68,56	6,72
4	0,253	8,09	7,28	72,96	14,12
6	0,256	8,19	7,38	73,90	14,66
8	0,258	8,26	7,44	74,53	14,81
10	0,260	8,33	7,50	75,16	14,94
15	0,260	8,33	7,50	75,16	37,50
20	0,260	8,33	7,50	75,16	37,50
25	0,261	8,37	7,53	75,47	37,58
30	0,254	8,13	7,31	73,27	37,11
				Jumlah AUC	218,25
				%ED	72,75

(Replikasi 2)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,207	6,49	5,84	58,50	2,92
2	0,261	8,37	7,53	75,47	6,69
4	0,275	8,86	7,97	79,87	15,50
6	0,271	8,72	7,85	78,62	15,82
8	0,269	8,65	7,78	77,99	15,63
10	0,264	8,47	7,63	76,42	15,41
15	0,267	8,58	7,72	77,36	38,37
20	0,268	8,61	7,75	77,67	38,68
25	0,266	8,54	7,69	77,04	38,60
30	0,261	8,37	7,53	75,47	38,05
				Jumlah AUC	225,67
				%ED	75,22

(Replikasi 3)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,194	6,03	5,43	54,42	2,72
2	0,248	7,92	7,12	71,39	6,28
4	0,281	9,07	8,16	81,76	15,28
6	0,263	8,44	7,59	76,10	15,75
8	0,252	8,06	7,25	72,64	14,84
10	0,258	8,26	7,44	74,53	14,69
15	0,261	8,37	7,53	75,47	37,43
20	0,305	9,90	8,91	89,30	41,11
25	0,253	8,09	7,28	72,96	40,48
30	0,257	8,23	7,41	74,22	36,72
				Jumlah AUC	225,30
				%ED	75,10

BATCH 2
(Replikasi 1)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,233	7,32	6,59	66,04	3,33
2	0,267	7,60	6,84	68,56	7,19
4	0,276	8,09	7,28	72,96	15,72
6	0,282	8,19	7,38	73,90	16,19
8	0,283	8,26	7,44	74,53	16,41
10	0,287	8,33	7,50	75,16	16,57
15	0,281	8,33	7,50	75,16	41,27
20	0,285	8,33	7,50	75,16	41,11
25	0,286	8,37	7,53	75,47	41,50
30	0,285	8,13	7,31	73,27	41,50
				Jumlah AUC	240,80
				%ED	80,27

(Replikasi 2)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,206	6,45	5,81	58,42	2,90
2	0,253	8,09	7,28	73,25	6,54
4	0,271	8,72	7,85	78,93	15,13
6	0,280	9,03	8,13	81,77	15,97
8	0,273	8,79	7,91	79,56	16,04
10	0,278	8,96	8,07	81,14	15,97
15	0,282	9,10	8,19	82,40	40,64
20	0,288	9,31	8,38	84,30	41,42
25	0,279	9,00	8,10	81,46	41,19
30	0,278	8,96	8,07	81,14	40,41
				Jumlah AUC	236,22
				%ED	78,74

(Replikasi 3)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,236	7,50	6,75	67,89	3,37
2	0,276	8,89	8,00	80,51	7,38
4	0,263	8,44	7,59	76,41	15,60
6	0,283	9,14	8,22	82,72	15,82
8	0,28	9,03	8,13	81,77	16,35
10	0,275	8,86	7,97	80,19	16,10
15	0,267	8,58	7,72	77,67	39,23
20	0,278	8,96	8,07	81,14	39,46
25	0,277	8,93	8,03	80,83	40,25
30	0,273	8,79	7,91	79,56	39,86
				Jumlah AUC	233,41
				%ED	77,80

BATCH 3
(Replikasi 1)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,267	8,58	7,72	73,81	3,86
2	0,316	10,29	9,26	88,50	8,49
4	0,319	10,39	9,35	89,40	18,61
6	0,311	10,11	9,10	87,00	18,45
8	0,336	10,98	9,88	94,50	18,99
10	0,319	10,39	9,35	89,40	19,24
15	0,322	10,49	9,45	90,30	46,99
20	0,331	10,81	9,73	93,00	47,93
25	0,316	10,29	9,26	88,50	47,46
30	0,318	10,36	9,32	89,10	46,44
				Jumlah AUC	276,46
				%ED	92,15

(Replikasi 2)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,270	8,68	7,81	74,71	3,91
2	0,242	7,71	6,94	66,31	7,38
4	0,228	7,22	6,50	62,11	13,43
6	0,239	7,60	6,84	65,41	13,34
8	0,259	8,30	7,47	71,41	14,31
10	0,254	8,13	7,31	69,91	14,78
15	0,256	8,19	7,38	70,51	36,72
20	0,248	7,92	7,12	68,11	36,25
25	0,247	7,88	7,09	67,81	35,54
30	0,223	7,04	6,34	60,61	33,58
				Jumlah AUC	209,25
				%ED	69,75

(Replikasi 3)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,285	9,21	8,28	79,21	4,14
2	0,307	9,97	8,98	85,80	8,63
4	0,327	10,67	9,60	91,80	18,58
6	0,311	10,11	9,10	87,00	18,70
8	0,316	10,29	9,26	88,50	18,36
10	0,343	11,23	10,10	96,60	19,36
15	0,323	10,53	9,48	90,60	48,95
20	0,322	10,49	9,45	90,30	47,31
25	0,317	10,32	9,29	88,80	46,84
30	0,313	10,18	9,16	87,60	46,13
				Jumlah AUC	277,00
				%ED	92,33

LAMPIRAN AF

HASIL UJI DISOLUSI TABLET ODT GENERIK

(Replikasi 1)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,058	1,29	1,17	11.78	0,58
2	0,139	4,12	3,71	37.36	2,44
4	0,202	6,31	5,68	57.20	9,39
6	0,201	6,28	5,65	56.90	11,33
8	0,226	7,15	6,43	64.75	12,08
10	0,294	9,52	8,57	86.30	15,00
15	0,238	7,57	6,81	68.58	38,45
20	0,246	7,85	7,06	71.10	34,68
25	0,246	7,85	7,06	71.10	35,31
30	0,248	7,92	7,12	71.70	35,47
				Jumlah AUC	194,72
				%ED	65,36

(Replikasi 2)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,053	1,12	1,01	10.17	0,50
2	0,119	3,42	3,08	31.02	2,04
4	0,184	5,69	5,12	51.56	8,20
6	0,228	7,22	6,50	65.46	11,61
8	0,214	6,73	6,06	61.03	12,56
10	0,265	8,51	7,66	77.14	13,72
15	0,228	7,22	6,50	65.46	35,39
20	0,251	8,02	7,22	72.71	34,29
25	0,250	7,99	7,19	72.41	36,01
30	0,258	8,26	7,44	74.92	36,56
				Jumlah AUC	190,88
				%ED	64,08

(Replikasi 3)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,057	1,26	1,13	11.38	0,57
2	0,125	3,63	3,27	32.93	2,20
4	0,209	6,56	5,90	59.42	9,17
6	0,221	6,98	6,28	63.24	12,18
8	0,224	7,08	6,37	64.15	12,65
10	0,219	6,91	6,21	62.54	12,59
15	0,248	7,92	7,12	71.70	33,35
20	0,259	8,30	7,47	75.23	36,48
25	0,251	8,02	7,22	72.71	36,72
30	0,244	7,78	7,00	70.49	35,54
				Jumlah AUC	191,45
				%ED	64,27

LAMPIRAN AG

HASIL UJI DISOLUSI TABLET PEMBANDING ODT PATEN

(Replikasi 1)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,079	2,03	1,82	18.41	0,91
2	0,124	3,59	3,24	32.77	2,53
4	0,168	5,13	4,62	46.73	7,85
6	0,228	7,22	6,50	65.75	11,11
8	0,205	6,42	5,78	58.47	12,27
10	0,206	6,45	5,81	58.77	11,58
15	0,230	7,29	6,56	66.36	30,92
20	0,230	7,29	6,56	66.36	32,80
25	0,232	7,36	6,62	66.96	32,96
30	0,244	7,78	7,00	70.81	34,05
				Jumlah AUC	176,99
				%ED	59,68

(Replikasi 2)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,077	1,96	1,76	17.80	0,88
2	0,144	4,29	3,86	39.05	2,81
4	0,171	5,23	4,71	47.64	8,57
6	0,198	6,17	5,56	56.24	10,27
8	0,217	6,84	6,15	62.21	11,71
10	0,226	7,15	6,43	65.04	12,59
15	0,232	7,36	6,62	66.96	32,64
20	0,241	7,67	6,90	69.80	33,82
25	0,225	7,11	6,40	64.74	33,27
30	0,237	7,53	6,78	68.58	32,96
				Jumlah AUC	179,51
				%ED	60,53

(Replikasi 3)

t (menit)	Abs	$C_{sampel\ (ppm)}$	Wt (mg)	% Wt	AUC
1	0,076	1,92	1,73	17.50	0,86
2	0,121	3,49	3,14	31.76	2,44
4	0,188	5,83	5,24	53.00	8,38
6	0,210	6,59	5,93	59.98	11,18
8	0,216	6,80	6,12	61.91	12,05
10	0,219	6,91	6,21	62.82	12,34
15	0,226	7,15	6,43	65.04	31,62
20	0,238	7,57	6,81	68.89	33,11
25	0,231	7,32	6,59	66.66	33,51
30	0,242	7,71	6,94	70.20	33,82
				Jumlah AUC	179,31
				%ED	60,46

LAMPIRAN AH

PERHITUNGAN KURVA BAKU

Replikasi	$C_{(ppm)}$	Abs	X^2	Y^2	XY
	2,04	0,081	4,1616	0,0066	0,16524
	4,08	0,141	16,6464	0,0199	0,57528
	6,12	0,191	37,4544	0,0365	1,16892
I	8,16	0,253	66,5856	0,0640	2,06448
	10,2	0,314	104,0400	0,0986	3,2028
	12,24	0,374	149,8176	0,1399	4,57776
	14,28	0,431	203,9184	0,1858	6,15468
Total			582,6240	0,5512	17,9092
	2,016	0,078	4,0643	0,0061	0,157248
	4,032	0,139	16,2570	0,0193	0,560448
	6,048	0,204	36,5783	0,0416	1,233792
II	8,064	0,270	65,0281	0,0729	2,17728
	10,08	0,327	101,6064	0,1069	3,29616
	12,096	0,386	146,3132	0,1490	4,669056
	14,112	0,442	199,1485	0,1954	6,237504
Total			568,9958	0,5912	18,3315
	2,016	0,078	4,0643	0,0061	0,157248
	4,032	0,135	16,2570	0,0182	0,54432
	6,048	0,185	36,5783	0,0342	1,11888
III	8,064	0,252	65,0281	0,0635	2,032128
	10,08	0,307	101,6064	0,0942	3,09456
	12,096	0,359	146,3132	0,1289	4,342464
	14,112	0,422	199,1485	0,1781	5,955264
Total			568,9958	0,5233	17,2449

Persamaan regresi :

Replikasi I : $y = 0,0287x + 0,0209$ **(**$r_{hitung} / r_{tabel} = 0,9997/ 0,754$)

Replikasi II : $y = 0,0303x + 0,0196$ **(**$r_{hitung} / r_{tabel} = 0,9993/ 0,754$)

Replikasi III : $y = 0,0284x + 0,0194$ **(**$r_{hitung} / r_{tabel} = 0,9996/ 0,754$)

	Jumlah X^2	Jumlah XY	Jumlah Y^2	n	Residual SS	Residual DF
Pers. Reg. I	582,984	17,909	0,551	7	$8{,}4377 \cdot 10^{-4}$	5
Pers. Reg. II	568,996	18,331	0,591	7	$4{,}4126 \cdot 10^{-4}$	5
Pers. Reg. III	568,996	17,245	0,523	7	$3{,}4250 \cdot 10^{-4}$	5
Pooled reg.					$16{,}2753 \cdot 10^{-4}$	15
Common reg.	1720,976	53,485	1,665		$2{,}7770 \cdot 10^{-3}$	17

$$SS1 = \sum (Y^2) - \frac{(XY)2}{(Y2)} = 0{,}551 - \frac{(17{,}909)2}{582{,}984} = 8{,}4377 \cdot 10^{-4}$$

$$SS2 = \sum (Y^2) - \frac{(XY)2}{(Y2)} = 0{,}591 - \frac{(18{,}33)2}{568{,}996} = 4{,}4126 \cdot 10^{-4}$$

$$SS3 = (Y^2) - \frac{(XY)2}{(Y2)} = 0{,}523 - \frac{(17{,}245)2}{568{,}996} = 3{,}4259 \cdot 10^{-4}$$

$$SSe = \text{Common regression} = 1{,}665 - \frac{(53{,}486)2}{1720{,}976} = 2{,}777 \cdot 10^{-4}$$

$$F_{hitung} = \frac{2{,}777 \cdot 10^{-4} - 16{,}2753 \cdot 10^{-4}}{5 - 1} \times \frac{15}{16{,}2753 \cdot 10^{-4}}$$

$$= \frac{2{,}777 \cdot 10^{-4} - 16{,}2753 \cdot 10^{-4}}{1{,}08502 \cdot 10^{-4}}$$

$$= 2{,}6485 < F_{(0{,}05)\,(2{,}15)} = 3{,}68$$

LAMPIRAN AI

HASIL UJI STATISTIK PERSEN OBAT TERLEPAS TABLET DOMPERIDONE PADA t=30 MENIT

(One-way Anava)

Descriptives

persen_obat_terlepas_30menit

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
formula optimum	3	77.1367	2.50165	1.44433	70.9222	83.3511	74.32	79.10
pembanding generik	3	72.3700	2.28974	1.32198	66.6820	78.0580	70.49	74.92
pembanding paten	3	69.8633	1.15249	.66539	67.0004	72.7263	68.58	70.81
Total	9	73.1233	3.66682	1.22227	70.3048	75.9419	68.58	79.10

Test of Homogeneity of Variances

persen_obat_terlepas_30menit

Levene Statistic	df1	df2	Sig.
1.274	2	6	.346

ANOVA

persen_obat_terlepas_30menit

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	81.906	2	40.953	9.576	.014
Within Groups	25.659	6	4.276		
Total	107.565	8			

Keterangan :

F_{hitung} (9,576) > $F_{tabel\ 0,05\ (1,4)}$ (7,71), berarti persen obat terlepas pada t=30 menit formula optimum berbeda bermakna terhadap pembanding generik dan paten. Hasil formula optimum yang diperoleh lebih baik daripada persen obat terlepas pembanding generik dan paten.

LAMPIRAN AJ

HASIL UJI STATISTIK PERSEN EFISIENSI DISOLUSI ODT DOMPERIDONE

(One-way Anava)

Descriptives

persen_ED

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
formula optimum	3	79.3467	5.20194	3.00334	66.4243	92.2690	74.36	84.74
pembanding generik	3	64.5700	.69072	.39879	62.8541	66.2859	64.08	65.36
pembanding paten	3	60.2233	.47184	.27242	59.0512	61.3954	59.68	60.53
Total	9	68.0467	9.07238	3.02413	61.0730	75.0203	59.68	84.74

Test of Homogeneity of Variances

persen_ED

Levene Statistic	df1	df2	Sig.
3.849	2	6	.084

ANOVA

persen_ED

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	602.945	2	301.473	32.580	.001
Within Groups	55.520	6	9.253		
Total	658.465	8			

Keterangan :

F_{hitung} (23,788) > $F_{tabel\ 0,05\ (1,4)}$ (7,71), berarti persen efisiensi disolusi formula optimum berbeda bermakna terhadap pembanding generik dan paten. Hasil formula optimum yang diperoleh lebih baik daripada persen efisiensi disolusi pembanding generik dan paten.

LAMPIRAN AK
HASIL UJI STATISTIK PENETAPAN KADAR ODT DOMPERIDONE
(One-way Anava)

Descriptives

PK

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula optimum	3	101.2667	2.89367	1.67066	94.0784	108.4549	99.40	104.60
pembanding generik	3	99.2667	.68069	.39299	97.5757	100.9576	98.50	99.80
pembanding paten	3	98.9000	1.73494	1.00167	94.5902	103.2098	97.00	100.40
Total	9	99.8111	2.04417	.68139	98.2398	101.3824	97.00	104.60

Test of Homogeneity of Variances

PK

Levene Statistic	df1	df2	Sig.
4.033	2	6	.078

ANOVA

PK

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.736	2	4.868	1.233	.356
Within Groups	23.693	6	3.949		
Total	33.429	8			

Keterangan :

F_{hitung} (1,223) < $F_{tabel\ 0,05\ (1,4)}$ (7,71), berarti penetapan kadar dari formula optimum menunjukkan tidak ada perbedaan signifikan dengan pembanding generik dan paten

LAMPIRAN AL

HASIL UJI STATISTIK KEKERASAN TABLET KO-PROSES

(One-Way Anava)

Descriptives

Kekerasan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	2,9333	0,20817	0,12019	2,4162	3,4504	2,70	3,10
F2	3	2,5667	0,23094	0,13333	1,9930	3,1404	2,30	2,70
F3	3	3,1667	0,05774	0,03333	3,0232	3,3101	3,10	3,20
F4	3	2,6000	0,45826	0,26458	1,4616	3,7384	2,10	3,00
F5	3	2,7000	0,20000	0,11547	2,2032	3,1968	2,50	2,90
F6	3	2,2000	0,10000	0,05774	1,9516	2,4484	2,10	2,30
F7	3	2,5667	0,11547	0,06667	2,2798	2,8535	2,50	2,70
F8	3	2,6667	0,15275	0,08819	2,2872	3,0461	2,50	2,80
Total	24	2,6750	0,32870	0,06710	2,5362	2,8138	2,10	3,20

Test of Homogeneity of Variances

Kekerasan

Levene Statistic	df1	df2	Sig.
2,456	7	16	0,065

ANOVA

Kekerasan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,692	7	0,242	4,874	0,004
Within Groups	0,793	16	0,050		
Total	2,485	23			

Keterangan :

Hasil uji statistik dengan metode One-way Anova diperoleh Fhitung $_{(4,874)}$ > F $_{(0,05)\,(7,16)}$ (2,26). Hal ini menunjukkan bahwa ada perbedaan bermakna dari kedelapan formula bahan ko-proses terhadap kekerasan tablet yang dihasilkan.

Multiple Comparisons

Kekerasan

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std, Error	Sig,	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	0,36667	0,18181	0,501	-0,2628	0,9961
	F3	-0,23333	0,18181	0,892	-0,8628	0,3961
	F4	0,33333	0,18181	0,609	-0,2961	0,9628
	F5	0,23333	0,18181	0,892	-0,3961	0,8628
	F6	0,73333*	0,18181	0,017	0,1039	1,3628
	F7	0,36667	0,18181	0,501	-0,2628	0,9961
	F8	0,26667	0,18181	0,813	-0,3628	0,8961
F2	F1	-0,36667	0,18181	0,501	-0,9961	0,2628
	F3	-,0,60000	0,18181	0,068	-1,2295	0,0295
	F4	-0,03333	0,18181	1,000	-0,6628	0,5961
	F5	-0,13333	0,18181	0,994	-0,7628	0,4961
	F6	0,36667	0,18181	0,501	-0,2628	0,9961
	F7	0,00000	0,18181	1,000	-0,6295	0,6295
	F8	-0,10000	0,18181	0,999	-0,7295	0,5295
F3	F1	0,23333	0,18181	0,892	-0,3961	0,8628
	F2	0,60000	0,18181	0,068	-0,0295	1,2295
	F4	0,56667	0,18181	0,094	-0,0628	1,1961
	F5	0,46667	0,18181	0,237	-0,1628	1,0961

	F6	0,96667*	0,18181	0,001	0,3372	1,5961
	F7	0,60000	0,18181	0,068	-0,0295	1,2295
	F8	0,50000	0,18181	0,177	-0,1295	1,1295
F4	F1	-0,33333	0,18181	0,609	-0,9628	0,2961
	F2	0,03333	0,18181	1,000	-0,5961	0,6628
	F3	-0,56667	0,18181	0,094	-1,1961	0,0628
	F5	-0,10000	0,18181	0,999	-0,7295	0,5295
	F6	0,40000	0,18181	0,400	-0,2295	1,0295
	F7	0,03333	0,18181	1,000	-0,5961	0,6628
	F8	-0,06667	0,18181	1,000	-0,6961	0,5628
F5	F1	-0,23333	0,18181	0,892	-0,8628	0,3961
	F2	0,13333	0,18181	0,994	-0,4961	0,7628
	F3	-0,46667	0,18181	0,237	-1,0961	0,1628
	F4	0,10000	, 0,18181	0,999	-0,5295	0,7295
	F6	0,50000	0,18181	0,177	-0,1295	1,1295
	F7	0,13333	0,18181	0,994	-0,4961	0,7628
	F8	0,03333	0,18181	1,000	-0,5961	0,6628
F6	F1	-0,73333*	0,18181	0,017	-1,3628	-0,1039
	F2	-0,36667	0,18181	0,501	-0,9961	0,2628
	F3	-0,96667*	,0,18181	0,001	-1,5961	-0,3372
	F4	-0,40000	0,18181	0,400	-1,0295	0,2295
	F5	-0,50000	0,18181	0,177	-1,1295	0,1295
	F7	-0,36667	0,18181	0,501	-0,9961	0,2628

	F8	-0,46667	0,18181	0,237	-1,0961	0,1628
F7	F1	-0,36667	0,18181	0,501	-0,9961	0,2628
	F2	0,00000	0,18181	1,000	-0,6295	0,6295
	F3	-0,60000	0,18181	0,068	-1,2295	0,0295
	F4	-0,03333	0,18181	1,000	-0,6628	0,5961
	F5	-0,13333	0,18181	0,994	-0,7628	0,4961
	F6	0,36667	0,18181	0,501	-0,2628	0,9961
	F8	-0,10000	0,18181	0,999	-0,7295	0,5295
F8	F1	-0,26667	0,18181	0,813	-0,8961	0,3628
	F2	0,10000	0,18181	0,999	-0,5295	0,7295
	F3	-0,50000	0,18181	0,177	-1,1295	0,1295
	F4	0,06667	0,18181	1,000	-0,5628	0,6961
	F5	-0,03333	0,18181	1,000	-0,6628	0,5961
	F6	0,46667	0,18181	0,237	-0,1628	1,0961
	F7	0,10000	0,18181	0,999	-0,5295	0,7295

*, The mean difference is significant at the 0,05 level,

Keterangan :

Pada uji HSD Tukey diperoleh nilai signifikasi bermakna antar formula bila nilai sig<α (0,05) yang dilambangkan dengan tanda (*). Dari hasil penelitian ini, formula yang menunjukkan adanya signifikasi bermakna yaitu pada F1 dengan F6 dan F3 dengan F6.

LAMPIRAN AM

HASIL UJI STATISTIK KERAPUHAN TABLET KO-PROSES

(One-Way Anava)

Descriptives

Kerapuhan

	N	Mean	Std, Deviation	Std, Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	0,7100	0,02646	0,01528	0,6443	0,7757	0,68	0,73
F2	3	0,5000	0,25239	0,14572	-0,1270	1,1270	0,27	0,77
F3	3	0,8233	0,11504	0,06642	0,5376	1,1091	0,71	0,94
F4	3	0,6367	0,00577	0,00333	0,6223	0,6510	0,63	0,64
F5	3	0,7600	0,05568	0,03215	0,6217	0,8983	0,70	0,81
F6	3	0,7400	0,06245	0,03606	0,5849	0,8951	0,67	0,79
F7	3	0,1400	0,07000	0,04041	-0,0339	0,3139	0,07	0,21
F8	3	0,3333	0,23116	0,13346	-0,2409	0,9076	0,09	0,55
Total	24	0,5804	0,25371	0,05179	0,4733	0,6875	0,07	0,94

Test of Homogeneity of Variances

Kerapuhan

Levene Statistic	df1	df2	Sig,
2,779	7	16	0,043

ANOVA

Kerapuhan

	Sum of Squares	df	Mean Square	F	Sig,
Between Groups	1,194	7	0,171	9,546	0,000
Within Groups	0,286	16	0,018		
Total	1,480	23			

Keterangan :

Hasil uji statistik dengan metode One-way Anova diperoleh Fhitung $_{(9,546)}$ > F $_{(0,05)\ (7,16)}$ (2,26). Hal ini menunjukkan bahwa ada perbedaan bermakna dari kedelapan formula bahan ko-proses terhadap kerapuhan tablet yang dihasilkan.

Multiple Comparisons

Kerapuhan

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std, Error	Sig,	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	0,21000	0,10916	0,555	-0,1679	0,5879
	F3	-0,11333	0,10916	0,961	-0,4913	0,2646
	F4	0,07333	0,10916	0,997	-0,3046	0,4513
	F5	-0,05000	0,10916	1,000	-0,4279	0,3279
	F6	-0,03000	0,10916	1,000	-0,4079	0,3479
	F7	0,57000*	0,10916	0,002	0,1921	0,9479
	F8	0,37667	0,10916	0,051	-0,0013	0,7546
F2	F1	-0,21000	0,10916	0,555	-0,5879	0,1679
	F3	-0,32333	0,10916	0,124	-0,7013	0,0546
	F4	-0,13667	0,10916	0,904	-0,5146	0,2413
	F5	-0,26000	0,10916	0,312	-0,6379	0,1179
	F6	-0,24000	0,10916	0,401	-0,6179	0,1379
	F7	0,36000	0,10916	0,068	-0,0179	0,7379
	F8	0,16667	0,10916	0,783	-0,2113	0,5446
F3	F1	0,11333	0,10916	0,961	-0,2646	0,4913
	F2	0,32333	0,10916	0,124	-0,0546	0,7013
	F4	0,18667	0,10916	0,682	-0,1913	0,5646
	F5	0,06333	0,10916	0,999	-0,3146	0,4413
	F6	0,08333	0,10916	0,993	-0,2946	0,4613

	F7	0,68333*	0,10916	0,000	0,3054	1,0613
	F8	0,49000*	0,10916	0,007	0,1121	0,8679
F4	F1	-0,07333	0,10916	0,997	-0,4513	0,3046
	F2	0,13667	0,10916	0,904	-0,2413	0,5146
	F3	-0,18667	0,10916	0,682	-0,5646	0,1913
	F5	-0,12333	0,10916	0,940	-0,5013	0,2546
	F6	-0,10333	0,10916	0,976	-0,4813	0,2746
	F7	0,49667*	0,10916	0,006	0,1187	0,8746
	F8	0,30333	0,10916	0,169	-0,0746	0,6813
F5	F1	0,05000	0,10916	1,000	-0,3279	0,4279
	F2	0,26000	0,10916	0,312	-0,1179	0,6379
	F3	0-,06333	0,10916	0,999	-0,4413	0,3146
	F4	0,12333	0,10916	0,940	-0,2546	0,5013
	F6	0,02000	0,10916	1,000	-0,3579	0,3979
	F7	0,62000*	0,10916	0,001	0,2421	0,9979
	F8	0,42667*	0,10916	0,021	0,0487	0,8046
F6	F1	0,03000	0,10916	1,000	-0,3479	0,4079
	F2	0,24000	0,10916	0,401	-0,1379	0,6179
	F3	-0,08333	0,10916	0,993	-0,4613	0,2946
	F4	0,10333	0,10916	0,976	-0,2746	0,4813
	F5	-0,02000	0,10916	1,000	-0,3979	0,3579
	F7	0,60000*	0,10916	0,001	0,2221	0,9779
	F8	0,40667*	0,10916	0,030	0,0287	0,7846

F7	F1	-0,57000*	0,10916	0,002	-0,9479	-0,1921
	F2	-0,36000	0,10916	0,068	-0,7379	0,0179
	F3	-0,68333*	0,10916	0,000	-1,0613	-0,3054
	F4	-0,49667*	0,10916	0,006	-0,8746	-0,1187
	F5	-0,62000*	0,10916	0,001	-0,9979	-0,2421
	F6	-0,60000*	0,10916	0,001	-0,9779	-0,2221
	F8	-0,19333	0,10916	0,646	-0,5713	0,1846
F8	F1	-0,37667	0,10916	0,051	-0,7546	0,0013
	F2	-0,16667	0,10916	0,783	-0,5446	0,2113
	F3	-0,49000*	0,10916	0,007	-0,8679	-0,1121
	F4	-0,30333	0,10916	0,169	-0,6813	0,0746
	F5	-0,42667*	0,10916	0,021	-0,8046	-0,0487
	F6	-0,40667*	0,10916	0,030	-0,7846	-0,0287
	F7	0,19333	0,10916	0,646	-0,1846	0,5713

*, The mean difference is significant at the 0,05 level,

Keterangan :

Pada uji HSD Tukey diperoleh nilai signifikasi bermakna antar formula bila nilai sig<α (0,05) yang dilambangkan dengan tanda (*). Dari hasil penelitian ini, formula yang menunjukkan adanya signifikasi bermakna yaitu pada F1 dengan F7, F3 dengan F7, F3 dengan F8, F4 dengan F7, F5 dengan F7, F5 dengan F8, F6 dengan F7, F6 dengan F8.

LAMPIRAN AN

HASIL UJI STATISTIK WAKTU HANCUR TABLET KO-PROSES

(One-Way Anava)

Descriptives

Waktu_Hancur

	N	Mean	Std, Deviation	Std, Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	8,2667	1,10151	0,63596	5,5304	11,0030	7,00	9,00
F2	3	32,2000	24,69332	14,25669	-29,1416	93,5416	15,80	60,60
F3	3	11,9333	5,27004	3,04266	-1,1582	25,0248	7,60	17,80
F4	3	4,2000	1,38564	0,80000	,7579	7,6421	3,40	5,80
F5	3	66,1333	12,50493	7,21973	35,0694	97,1973	52,80	77,60
F6	3	21,4667	23,26571	13,43246	-36,3286	79,2619	5,80	48,20
F7	3	15,2667	3,87986	2,24004	5,6286	24,9048	10,80	17,80
F8	3	56,8000	8,12650	4,69184	36,6127	76,9873	50,60	66,00
Total	24	27,0333	24,65107	5,03188	16,6241	37,4426	3,40	77,60

Test of Homogeneity of Variances

Waktu_Hancur

Levene Statistic	df1	df2	Sig,
6,453	7	16	0,001

ANOVA

Waktu_Hancur

	Sum of Squares	df	Mean Square	F	Sig,
Between Groups	11137,680	7	1591,097	8,968	0,000
Within Groups	2838,853	16	177,428		
Total	13976,533	23			

Keterangan :

Hasil uji statistik dengan metode One-way Anova diperoleh Fhitung $_{(8,968)}$ > F $_{(0,05)\ (7,16)}$ (2,26).Hal ini menunjukkan bahwa ada perbedaan bermakna dari kedelapan formula bahan ko-proses terhadap waktu hancur tablet yang dihasilkan.

Multiple Comparisons

Waktu_Hancur

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std, Error	Sig,	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	-23,93333	10,87592	0,400	-61,5874	13,7207
	F3	-3,66667	10,87592	1,000	-41,3207	33,9874
	F4	4,06667	10,87592	1,000	-33,5874	41,7207
	F5	-57,86667*	10,87592	0,001	-95,5207	-20,2126
	F6	-13,20000	10,87592	0,916	-50,8541	24,4541
	F7	-7,00000	10,87592	0,997	-44,6541	30,6541
	F8	-48,53333*	10,87592	0,007	-86,1874	-10,8793
F2	F1	23,93333	10,87592	0,400	-13,7207	61,5874
	F3	20,26667	10,87592	0,591	-17,3874	57,9207
	F4	28,00000	10,87592	0,234	-9,6541	65,6541
	F5	-33,93333	10,87592	0,094	-71,5874	3,7207
	F6	10,73333	10,87592	0,970	-26,9207	48,3874
	F7	16,93333	10,87592	0,767	-20,7207	54,5874
	F8	-24,60000	10,87592	0,369	-62,2541	13,0541
F3	F1	3,66667	10,87592	1,000	-33,9874	41,3207
	F2	-20,26667	10,87592	0,591	-57,9207	17,3874
	F4	7,73333	10,87592	0,995	-29,9207	45,3874
	F5	-54,20000*	10,87592	0,003	-91,8541	-16,5459

	F6	-9,53333	10,87592	0,984	-47,1874	28,1207
	F7	-3,33333	10,87592	1,000	-40,9874	34,3207
	F8	-44,86667*	10,87592	0,014	-82,5207	-7,2126
F4	F1	-4,06667	10,87592	1,000	-41,7207	33,5874
	F2	-28,00000	10,87592	0,234	-65,6541	9,6541
	F3	-7,73333	10,87592	0,995	-45,3874	29,9207
	F5	-61,93333*	10,87592	0,001	-99,5874	-24,2793
	F6	-17,26667	10,87592	0,751	-54,9207	20,3874
	F7	-11,06667	10,87592	0,965	-48,7207	26,5874
	F8	-52,60000*	10,87592	0,004	-90,2541	-14,9459
F5	F1	57,86667*	10,87592	0,001	20,2126	95,5207
	F2	33,93333	10,87592	0,094	-3,7207	71,5874
	F3	54,20000*	10,87592	0,003	16,5459	91,8541
	F4	61,93333*	10,87592	0,001	24,2793	99,5874
	F6	44,66667*	10,87592	0,015	7,0126	82,3207
	F7	50,86667*	10,87592	0,005	13,2126	88,5207
	F8	9,33333	10,87592	0,986	-28,3207	46,9874
F6	F1	13,20000	10,87592	0,916	-24,4541	50,8541
	F2	-10,73333	10,87592	0,970	-48,3874	26,9207
	F3	9,53333	10,87592	0,984	-28,1207	47,1874
	F4	17,26667	10,87592	0,751	-20,3874	54,9207
	F5	-44,66667*	10,87592	0,015	-82,3207	-7,0126
	F7	6,20000	10,87592	0,999	-31,4541	43,8541

	F8	-35,33333	10,87592	0,074	-72,9874	2,3207
F7	F1	7,00000	10,87592	0,997	-30,6541	44,6541
	F2	-16,93333	10,87592	0,767	-54,5874	20,7207
	F3	3,33333	10,87592	1,000	-34,3207	40,9874
	F4	11,06667	10,87592	0,965	-26,5874	48,7207
	F5	-50,86667*	10,87592	0,005	-88,5207	-13,2126
	F6	-6,20000	10,87592	0,999	-43,8541	31,4541
	F8	-41,53333*	10,87592	0,025	-79,1874	-3,8793
F8	F1	48,53333*	10,87592	0,007	10,8793	86,1874
	F2	24,60000	10,87592	0,369	-13,0541	62,2541
	F3	44,86667*	10,87592	0,014	7,2126	82,5207
	F4	52,60000*	10,87592	0,004	14,9459	90,2541
	F5	-9,33333	10,87592	0,986	-46,9874	28,3207
	F6	35,33333	10,87592	0,074	-2,3207	72,9874
	F7	41,53333*	10,87592	0,025	3,8793	79,1874

*, The mean difference is significant at the 0,05 level,

Keterangan :

Pada uji HSD Tukey diperoleh nilai signifikasi bermakna antar formula bila nilai sig<α (0,05) yang dilambangkan dengan tanda (*). Dari hasil penelitian ini, formula yang menunjukkan adanya signifikasi bermakna yaitu pada F1 dengan F5, F1 dengan F8, F3 dengan F5, F3 dengan F8, F4 dengan F5, F4 dengan F8, F5 dengan F6, F5 dengan F7, dan F7 dengan F8.

LAMPIRAN AO

HASIL UJI STATISTIK WAKTU PEMBASAHAN TABLET KO-PROSES

(One-Way Anava)

Descriptives

Waktu_Pembasahan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	15,0333	4,07717	2,35396	4,9051	25,1616	10,50	18,40
F2	3	52,6000	35,27435	20,36566	-35,0264	140,2264	25,20	92,40
F3	3	13,4000	5,89237	3,40196	-1,2375	28,0375	8,20	19,80
F4	3	7,7333	1,96299	1,13333	2,8570	12,6097	6,60	10,00
F5	3	78,6000	31,63732	18,26582	0,0085	157,1915	54,40	114,40
F6	3	43,2000	30,54963	17,63784	-32,6895	119,0895	23,60	78,40
F7	3	42,7333	5,85947	3,38296	28,1776	57,2891	38,40	49,40
F8	3	63,1333	4,95715	2,86201	50,8191	75,4476	57,80	67,60
Total	24	39,5542	29,70964	6,06445	27,0089	52,0994	6,60	114,40

Test of Homogeneity of Variances

Waktu_Pembasahan

Levene Statistic	df1	df2	Sig.
6,358	7	16	0,001

ANOVA

Waktu_Pembasahan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13716,073	7	1959,439	4,761	0,005
Within Groups	6585,167	16	411,573		
Total	20301,240	23			

Keterangan :

Hasil uji statistik dengan metode One-way Anova diperoleh Fhitung $_{(4,761)}$ > F $_{(0,05)\ (7,16)}$ (2,26).Hal ini menunjukkan bahwa ada perbedaan bermakna dari kedelapan formula bahan ko-proses terhadap waktu pembasahan tablet yang dihasilkan.

Multiple Comparisons

Waktu_Pembasahan

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std, Error	Sig,	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	-37,56667	16,56448	0,366	-94,9154	19,7821
	F3	1,63333	16,56448	1,000	-55,7154	58,9821
	F4	7,30000	16,56448	1,000	-50,0487	64,6487
	F5	-63,56667*	16,56448	0,024	-120,9154	-6,2179
	F6	-28,16667	16,56448	0,687	-85,5154	29,1821
	F7	-27,70000	16,56448	0,704	-85,0487	29,6487
	F8	-48,10000	16,56448	0,137	-105,4487	9,2487
F2	F1	37,56667	16,56448	0,366	-19,7821	94,9154
	F3	39,20000	16,56448	0,319	-18,1487	96,5487
	F4	44,86667	16,56448	0,189	-12,4821	102,2154
	F5	-26,00000	16,56448	0,761	-83,3487	31,3487
	F6	9,40000	16,56448	0,999	-47,9487	66,7487
	F7	9,86667	16,56448	0,998	-47,4821	67,2154
	F8	-10,53333	16,56448	0,998	-67,8821	46,8154
F3	F1	-1,63333	16,56448	1,000	-58,9821	55,7154
	F2	-39,20000	16,56448	0,319	-96,5487	18,1487
	F4	5,66667	16,56448	1,000	-51,6821	63,0154
	F5	-65,20000*	16,56448	0,020	-122,5487	-7,8513
	F6	-29,80000	16,56448	0,629	-87,1487	27,5487

	F7	-29,33333	16,56448	0,646	-86,6821	28,0154
	F8	-49,73333	16,56448	0,115	-107,0821	7,6154
F4	F1	-7,30000	16,56448	1,000	-64,6487	50,0487
	F2	-44,86667	16,56448	0,189	-102,2154	12,4821
	F3	-5,66667	16,56448	1,000	-63,0154	51,6821
	F5	-70,86667*	16,56448	0,010	-128,2154	-13,5179
	F6	-35,46667	16,56448	0,432	-92,8154	21,8821
	F7	-35,00000	16,56448	0,447	-92,3487	22,3487
	F8	-55,40000	16,56448	0,062	-112,7487	1,9487
F5	F1	63,56667*	16,56448	0,024	6,2179	120,9154
	F2	26,00000	16,56448	0,761	-31,3487	83,3487
	F3	65,20000*	16,56448	0,020	7,8513	122,5487
	F4	70,86667*	16,56448	0,010	13,5179	128,2154
	F6	35,40000	16,56448	0,434	-21,9487	92,7487
	F7	35,86667	16,56448	0,419	-21,4821	93,2154
	F8	15,46667	16,56448	0,978	-41,8821	72,8154
F6	F1	28,16667	16,56448	0,687	-29,1821	85,5154
	F2	-9,40000	16,56448	0,999	-66,7487	47,9487
	F3	29,80000	16,56448	0,629	-27,5487	87,1487
	F4	35,46667	16,56448	0,432	-21,8821	92,8154
	F5	-35,40000	16,56448	0,434	-92,7487	21,9487
	F7	,46667	16,56448	1,000	-56,8821	57,8154
	F8	-19,93333	16,56448	0,919	-77,2821	37,4154

F7	F1	27,70000	16,56448	0,704	-29,6487	85,0487
	F2	-9,86667	16,56448	0,998	-67,2154	47,4821
	F3	29,33333	16,56448	0,646	-28,0154	86,6821
	F4	35,00000	16,56448	0,447	-22,3487	92,3487
	F5	-35,86667	16,56448	0,419	-93,2154	21,4821
	F6	-,46667	16,56448	1,000	-57,8154	56,8821
	F8	-20,40000	16,56448	0,910	-77,7487	36,9487
F8	F1	48,10000	16,56448	0,137	-9,2487	105,4487
	F2	10,53333	16,56448	0,998	-46,8154	67,8821
	F3	49,73333	16,56448	0,115	-7,6154	107,0821
	F4	55,40000	16,56448	0,062	-1,9487	112,7487
	F5	-15,46667	16,56448	0,978	-72,8154	41,8821
	F6	19,93333	16,56448	0,919	-37,4154	77,2821
	F7	20,40000	16,56448	0,910	-36,9487	77,7487

*, The mean difference is significant at the 0,05 level,

Keterangan :

Pada uji HSD Tukey diperoleh nilai signifikasi bermakna antar formula bila nilai sig<α (0,05) yang dilambangkan dengan tanda (*). Dari hasil penelitian ini, formula yang menunjukkan adanya signifikasi bermakna yaitu pada F1 dengan F5, F3 dengan F5, dan F4 dengan F5.

LAMPIRAN AP

HASIL UJI STATISTIK RASIO ABSORPSI TABLET KO-PROSES

(One-Way Anava)

Descriptives

Rasio_Absorpsi_Air

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	144,6667	19,00877	10,97472	97,4463	191,8871	126,00	164,00
F2	3	146,6667	10,06645	5,81187	121,6602	171,6731	136,00	156,00
F3	3	130,6667	16,56301	9,56266	89,5219	171,8115	115,00	148,00
F4	3	162,6667	16,44182	9,49269	121,8229	203,5104	144,00	175,00
F5	3	146,3333	14,57166	8,41295	110,1353	182,5313	131,00	160,00
F6	3	139,0000	6,08276	3,51188	123,8896	154,1104	132,00	143,00
F7	3	165,3333	27,02468	15,60271	98,2003	232,4664	145,00	196,00
F8	3	160,0000	18,33030	10,58301	114,4650	205,5350	144,00	180,00
Total	24	149,4167	18,37748	3,75129	141,6565	157,1768	115,00	196,00

Test of Homogeneity of Variances

Rasio_Absorpsi_Air

Levene Statistic	df1	df2	Sig.
1,093	7	16	0,413

ANOVA

Rasio_Absorpsi_Air

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3121,833	7	445,976	1,536	0,225
Within Groups	4646,000	16	290,375		
Total	7767,833	23			

Keterangan :

Hasil uji statistik dengan metode One-way Anova diperoleh Fhitung $_{(1,536)}$ < F $_{(0,05)\ (7,16)}$ (2,26). Hal ini menunjukkan bahwa tidak ada perbedaan bermakna dari kedelapan formula bahan ko-proses terhadap rasio absorpsi tablet yang dihasilkan. Oleh karena itu, tidak dapat dilanjutkan dengan uji HSD Tukey.

Multiple Comparisons

Rasio_Absorpsi_Air

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std, Error	Sig,	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	-2,00000	13,91342	1,000	-50,1704	46,1704
	F3	14,00000	13,91342	0,967	-34,1704	62,1704
	F4	-18,00000	13,91342	0,889	-66,1704	30,1704
	F5	-1,66667	13,91342	1,000	-49,8370	46,5037
	F6	5,66667	13,91342	1,000	-42,5037	53,8370
	F7	-20,66667	13,91342	0,804	-68,8370	27,5037
	F8	-15,33333	13,91342	0,947	-63,5037	32,8370
F2	F1	2,00000	13,91342	1,000	-46,1704	50,1704
	F3	16,00000	13,91342	0,935	-32,1704	64,1704
	F4	-16,00000	13,91342	0,935	-64,1704	32,1704
	F5	0,33333	13,91342	1,000	-47,8370	48,5037
	F6	7,66667	13,91342	0,999	-40,5037	55,8370
	F7	-18,66667	13,91342	0,870	-66,8370	29,5037
	F8	-13,33333	13,91342	0,974	-61,5037	34,8370
F3	F1	-14,00000	13,91342	0,967	-62,1704	34,1704
	F2	-16,00000	13,91342	0,935	-64,1704	32,1704
	F4	-32,00000	13,91342	0,350	-80,1704	16,1704
	F5	-15,66667	13,91342	0,941	-63,8370	32,5037
	F6	-8,33333	13,91342	0,998	-56,5037	39,8370

	F7	-34,66667	13,91342	0,266	-82,8370	13,5037
	F8	-29,33333	13,91342	0,449	-77,5037	18,8370
F4	F1	18,00000	13,91342	0,889	-30,1704	66,1704
	F2	16,00000	13,91342	0,935	-32,1704	64,1704
	F3	32,00000	13,91342	0,350	-16,1704	80,1704
	F5	16,33333	13,91342	0,928	-31,8370	64,5037
	F6	23,66667	13,91342	0,687	-24,5037	71,8370
	F7	-2,66667	13,91342	1,000	-50,8370	45,5037
	F8	2,66667	13,91342	1,000	-45,5037	50,8370
F5	F1	1,66667	13,91342	1,000	-46,5037	49,8370
	F2	-,33333	13,91342	1,000	-48,5037	47,8370
	F3	15,66667	13,91342	0,941	-32,5037	63,8370
	F4	-16,33333	13,91342	0,928	-64,5037	31,8370
	F6	7,33333	13,91342	0,999	-40,8370	55,5037
	F7	-19,00000	13,91342	0,860	-67,1704	29,1704
	F8	-13,66667	13,91342	0,971	-61,8370	34,5037
F6	F1	-5,66667	13,91342	1,000	-53,8370	42,5037
	F2	-7,66667	13,91342	0,999	-55,8370	40,5037
	F3	8,33333	13,91342	0,998	-39,8370	56,5037
	F4	-23,66667	13,91342	0,687	-71,8370	24,5037
	F5	-7,33333	13,91342	0,999	-55,5037	40,8370
	F7	-26,33333	13,91342	0,574	-74,5037	21,8370
	F8	-21,00000	13,91342	0,792	-69,1704	27,1704

F7	F1	20,66667	13,91342	0,804	-27,5037	68,8370
	F2	18,66667	13,91342	0,870	-29,5037	66,8370
	F3	34,66667	13,91342	0,266	-13,5037	82,8370
	F4	2,66667	13,91342	1,000	-45,5037	50,8370
	F5	19,00000	13,91342	0,860	-29,1704	67,1704
	F6	26,33333	13,91342	0,574	-21,8370	74,5037
	F8	5,33333	13,91342	1,000	-42,8370	53,5037
F8	F1	15,33333	13,91342	0,947	-32,8370	63,5037
	F2	13,33333	13,91342	0,974	-34,8370	61,5037
	F3	29,33333	13,91342	0,449	-18,8370	77,5037
	F4	-2,66667	13,91342	1,000	-50,8370	45,5037
	F5	13,66667	13,91342	0,971	-34,5037	61,8370
	F6	21,00000	13,91342	0,792	-27,1704	69,1704
	F7	-5,33333	13,91342	1,000	-53,5037	42,8370

Keterangan :

Tidak dapat dilanjutkan dengan uji HSD Tukey dikarenakan tidak adanya perbedaan bermakna antar kedelapan formula terhadap rasio absorpsi air.

LAMPIRAN AQ

HASIL UJI STATISTIK *CARR'S INDEX* GRANUL KO-PROSES OPTIMUM

(One Sample t-Test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
carr_index	3	19.6667	.57735	.33333

One-Sample Test

	Test Value = 19.995					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
carr_index	-.985	2	.428	-.32833	-1.7626	1.1059

Keterangan :

T_{hitung} (0,985) < $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,428 > 0,05 berarti tidak terdapat perbedaan bermakna pada *carr's index* formula optimum granul ko-proses dengan *carr's index* yang diprediksikan oleh program optimasi *Design Expert.*

LAMPIRAN AR
HASIL UJI STATISTIK *HAUSNER RATIO* PADA GRANUL KO-PROSES OPTIMUM
(One Sample t-Test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
hausner_ratio	3	1.2433	.01155	.00667

One-Sample Test

	Test Value = 1.248					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
hausner_ratio	-.700	2	.556	-.00467	-.0334	.0240

Keterangan :

T_{hitung} (0,700) < $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,556 > 0,05 berarti tidak terdapat perbedaan bermakna pada *hausner ratio* formula optimum granul ko-proses dengan *hausner ratio* yang diprediksikan oleh program optimasi *Design Expert.*

LAMPIRAN AS

HASIL UJI STATISTIK KEKERASAN TABLET KO-PROSES OPTIMUM

(One sample T-test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
kekerasan	3	2.6167	.03512	.02028

One-Sample Test

	Test Value = 2.68					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
kekerasan	-3.124	2	.089	-.06333	-.1506	.0239

Keterangan :

T_{hitung} (3,124) < $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,089 > 0,05 berarti tidak terdapat perbedaan bermakna pada kekerasan tablet ko-proses formula optimum dengan kekerasan yang diprediksikan oleh program optimasi *Design Expert*.

LAMPIRAN AT

HASIL UJI STATISTIK KERAPUHAN TABLET KO-PROSES OPTIMUM

(One sample T-test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
kerapuhan	3	.4833	.02887	.01667

One-Sample Test

	Test Value = 0.49					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
kerapuhan	-.400	2	.728	-.00667	-.0784	.0650

Keterangan :

T_{hitung} (0,400) < $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,728 > 0,05 berarti tidak terdapat perbedaan bermakna pada kerapuhan tablet ko-proses optimum dengan kerapuhan yang diprediksikan oleh program optimasi *Design Expert*.

LAMPIRAN AV

HASIL UJI STATISTIK WAKTU HANCUR TABLET KO-PROSES OPTIMUM

(One sample T-test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
waktu_hancur	3	21.7333	3.77536	2.17970

One-Sample Test

	Test Value = 58.90					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
waktu_hancur	-17.051	2	.003	-37.16667	-46.5452	-27.7882

Keterangan :

T_{hitung} (17,051) > $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,003 < 0,05 berarti terdapat perbedaan bermakna pada waktu hancur tablet ko-proses optimum dengan waktu hancur yang diprediksikan oleh program optimasi *Design Expert*.

LAMPIRAN AV

HASIL UJI STATISTIK WAKTU BASAH TABLET KO-PROSES OPTIMUM

(One sample T-test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
waktu_basah	3	42.4000	5.37773	3.10483

One-Sample Test

	Test Value = 67.83					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
waktu_basah	-8.190	2	.015	-25.43000	-38.7890	-12.0710

Keterangan :

T_{hitung} (8,190) > $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,015 < 0,05 berarti terdapat perbedaan bermakna pada waktu basah tablet ko-proses waktu basah yang diprediksikan oleh program optimasi *Design Expert*.

LAMPIRAN AW

HASIL UJI STATISTIK RASIO ABSORPSI AIR TABLET KO-PROSES OPTIMUM

(One sample T-test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
rasio_absorpsi_air	3	165.5933	1.31842	.76119

One-Sample Test

	Test Value = 154.813					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
rasio_absorpsi_air	14.162	2	.005	10.78033	7.5052	14.0555

Keterangan :

T_{hitung} (14,162) > $T_{tabel\ (0,05)\ (2)}$ (4,303) dan nilai signifikasi yang diperoleh yaitu 0,005 < 0,05 berarti terdapat perbedaan bermakna pada rasio absoprsi air tablet ko-proses dengan rasio absorpsi air yang diprediksikan oleh program optimasi *Design Expert.*

LAMPIRAN AX

HASIL UJI STATISTIK KEKERASAN TABLET KO-PROSES OPTIMUM

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
kekerasan	sebelum	3	2.6167	.03512	.02028
	sesudah	3	2.4767	.03512	.02028

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kekerasan	Equal variances assumed	.000	1.000	4.882	4	.008	.14000	.02867	.06039	.21961
	Equal variances not assumed			4.882	4.000	.008	.14000	.02867	.06039	.21961

Keterangan :

T_{hitung} (4,882) > $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,008< 0,05 berarti terdapat perbedaan bermakna pada kekerasan tablet ko-proses sebelum dan sesudah stabilitas.

LAMPIRAN AY

HASIL UJI STATISTIK KERAPUHAN TABLET KO-PROSES OPTIMUM

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
kerapuhan	sebelum	3	.4833	.02887	.01667
	sesudah	3	.4933	.03055	.01764

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kerapuhan	Equal variances assumed	.000	1.000	-.412	4	.701	-.01000	.02427	-.07738	.05738
	Equal variances not assumed			-.412	3.987	.701	-.01000	.02427	-.07746	.05746

Keterangan :

T_{hitung} (0,412) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,701> 0,05 berarti tidak terdapat perbedaan bermakna pada kerapuhan tablet ko-proses sebelum dan sesudah stabilitas.

LAMPIRAN AZ

HASIL UJI STATISTIK WAKTU BASAH TABLET KO-PROSES OPTIMUM

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
waktu_basah	sebelum	3	42.4000	5.37773	3.10483
	sesudah	3	29.4000	7.35119	4.24421

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waktu_basah	Equal variances assumed	.426	.549	2.472	4	.069	13.00000	5.25864	-1.60034	27.60034
	Equal variances not assumed			2.472	3.664	.075	13.00000	5.25864	-2.14373	28.14373

Keterangan :

T_{hitung} (2,472) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,069 < 0,05 berarti tidak terdapat perbedaan bermakna pada waktu basah tablet ko-proses sebelum dan sesudah stabilitas.

LAMPIRAN BA

HASIL UJI STATISTIK WAKTU HANCUR TABLET KO-PROSES OPTIMUM

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
waktu_hancur	sebelum	3	21.7333	3.77536	2.17970
	sesudah	3	20.9333	5.51483	3.18399

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waktu_hancur	Equal variances assumed	.300	.613	.207	4	.846	.80000	3.85861	-9.91323	11.51323
	Equal variances not assumed			.207	3.537	.847	.80000	3.85861	-10.48958	12.08958

Keterangan :

T_{hitung} (0,207) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,846 > 0,05 berarti tidak terdapat perbedaan bermakna pada waktu hancur tablet ko-proses sebelum dan sesudah stabilitas.

LAMPIRAN BB

HASIL UJI STATISTIK RASIO ABSORPSI AIR TABLET KO-PROSES OPTIMUM

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
rasio_absorpsi_air	sebelum	3	165.5933	1.31842	.76119
	sesudah	3	170.4267	11.84386	6.83805

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
rasio_absorpsi_air	Equal variances assumed	12.384	.024	-.702	4	.521	-4.83333	6.88029	-23.93608	14.26941
	Equal variances not assumed			-.702	2.050	.554	-4.83333	6.88029	-33.76135	24.09468

Keterangan :

T_{hitung} (0,702) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,521 > 0,05 berarti tidak terdapat perbedaan bermakna pada rasio absorpsi air tablet ko-proses sebelum dan sesudah stabilitas.

LAMPIRAN BC

HASIL UJI STATISTIK KEKERASAN TABLET ODT DOMPERIDONE

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
kekerasan	sebelum	3	2.4300	.18682	.10786
	sesudah	3	2.4467	.11372	.06566

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kekerasan	Equal variances assumed	.685	.454	-.132	4	.901	-.01667	.12627	-.36725	.33392
	Equal variances not assumed			-.132	3.303	.903	-.01667	.12627	-.39843	.36509

Keterangan :

T_{hitung} (0,132) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,901 > 0,05 berarti tidak terdapat perbedaan bermakna pada kekerasan tablet ODT yang mengandung domperidone sebelum dan sesudah stabilitas.

LAMPIRAN BD

HASIL UJI STATISTIK KERAPUHAN TABLET ODT DOMPERIDONE

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
kerapuhan	sebelum	3	.4533	.03055	.01764
	sesudah	3	.4967	.02082	.01202

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kerapuhan	Equal variances assumed	.507	.516	-2.030	4	.112	-.04333	.02134	-.10259	.01593
	Equal variances not assumed			-2.030	3.528	.122	-.04333	.02134	-.10586	.01919

Keterangan :

T_{hitung} (2,03) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,122 > 0,05 berarti tidak terdapat perbedaan bermakna pada kerapuhan tablet ODT yang mengandung domperidone sebelum dan sesudah stabilitas.

LAMPIRAN BE

HASIL UJI STATISTIK WAKTU HANCUR TABLET ODT DOMPERIDONE

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
waktu_hancur	sebelum	3	42.1333	8.11008	4.68235
	sesudah	3	39.2667	7.56131	4.36552

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waktu_hancur	Equal variances assumed	.002	.967	.448	4	.677	2.86667	6.40174	-14.90740	20.64073
	Equal variances not assumed			.448	3.981	.678	2.86667	6.40174	-14.94175	20.67509

Keterangan :

$T_{hitung}(0,448) < T_{tabel\ (0,05)\ (4)}(2,776)$ dan nilai signifikasi yang diperoleh yaitu 0,677 > 0,05 berarti tidak terdapat perbedaan bermakna pada waktu hancur tablet ODT yang mengandung domperidone sebelum dan sesudah stabilitas.

LAMPIRAN BF

HASIL UJI STATISTIK WAKTU BASAH TABLET ODT DOMPERIDONE

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
waktu_basah	sebelum	3	105.8000	7.00000	4.04145
	sesudah	3	95.9333	12.82550	7.40480

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waktu_basah	Equal variances assumed	2.208	.211	1.170	4	.307	9.86667	8.43590	-13.55515	33.28849
	Equal variances not assumed			1.170	3.094	.324	9.86667	8.43590	-16.52259	36.25593

Keterangan :

T_{hitung} (1,170) < $T_{tabel\ (0,05)\ (4)}$ (2,776) dan nilai signifikasi yang diperoleh yaitu 0,307 > 0,05 berarti tidak terdapat perbedaan bermakna pada waktu basah tablet ODT yang mengandung domperidone sebelum dan sesudah stabilitas.

LAMPIRAN BG

HASIL UJI STATISTIK RASIO ABSORPSI AIR TABLET ODT DOMPERIDONE

(Independent sample T-test)

Group Statistics

	stabilitas	N	Mean	Std. Deviation	Std. Error Mean
rasio_absorpsi_air	sebelum	3	154.2267	5.83521	3.36896
	sesudah	3	158.5500	4.37734	2.52726

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
rasio_absorpsi_air	Equal variances assumed	.258	.638	-1.027	4	.363	-4.32333	4.21152	-16.01639	7.36972
	Equal variances not assumed			-1.027	3.710	.367	-4.32333	4.21152	-16.38643	7.73976

Keterangan : $T_{hitung}(1,027)<T_{tabel\ (0,05)(4)}(2,776)$ dan nilai signifikasi yang diperoleh yaitu 0,363>0,05 berarti tidak terdapat perbedaan bermakna pada rasio absorpsi air tablet ODT yang mengandung domperidone sebelum dan sesudah stabilitas.

LAMPIRAN BH

HASIL UJI ANAVA TERHADAP RESPON *CARR'S INDEX* DENGAN PROGRAM *DESIGN EXPERT*

Response 1 Carr's index

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	13.54	7	1.93	0.75	0.6340	
not significant						
A-Konsentrasi HPMC	*4.24*	*1*	*4.24*	*1.65*	*0.2175*	
B-Konsentrasi Manitol	*0.18*	*1*	*0.18*	*0.071*	*0.7937*	
C-Konsentrasi CP	*2.59*	*1*	*2.59*	*1.01*	*0.3304*	
AB0.18	*1*	*0.18*	*0.071*	*0.7937*		
AC0.66	*1*	*0.66*	*0.26*	*0.6187*		
BC5.67	*1*	*5.67*	*2.20*	*0.1571*		
ABC5.704E-003	*1*	*5.704E-003*	*2.216E-003*	*0.9630*		
Pure Error	41.19	16	2.57			
Cor Total	54.73	23				

The "Model F-value" of 0.75 implies the model is not significant relative to the noise. There is a 63.40 % chance that a "Model F-value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.
In this case there are no significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	1.60	R-Squared	0.2474
Mean	20.75	Adj R-Squared	-0.0818
C.V. %	7.73	Pred R-Squared	-0.6933
PRESS	92.68	Adeq Precision	2.504

A negative "Pred R-Squared" implies that the overall mean is a better predictor of your response than the current model.

"Adeq Precision" measures the signal to noise ratio. A ratio of 2.50 indicates an inadequate signal and we should not use this model to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	20.75	1	0.33	20.05	21.44	
A-Konsentrasi HPMC	-0.42	1	0.33	-1.11	0.27	1.00
B-Konsentrasi Manitol	0.087	1	0.33	-0.61	0.78	1.00
C-Konsentrasi CP	-0.33	1	0.33	-1.02	0.37	1.00
AB-0.087	1	0.33	-0.78	0.61	1.00	
AC-0.17	1	0.33	-0.86	0.53	1.00	
BC0.49	1	0.33	-0.21	1.18	1.00	
ABC0.015	1	0.33	-0.68	0.71	1.00	

Final Equation in Terms of Coded Factors:

Carr's index =
+20.75
-0.42 * A
+0.087 * B
-0.33 * C
-0.087 * A * B
-0.17 * A * C
+0.49 * B * C
+0.015 * A * B * C

Final Equation in Terms of Actual Factors:

Carr's index	=
+20.74708	
-0.42042	* Konsentrasi HPMC
+0.087083	* Konsentrasi Manitol
-0.32875	* Konsentrasi CP
-0.087083	* Konsentrasi HPMC * Konsentrasi Manitol
-0.16625	* Konsentrasi HPMC * Konsentrasi CP
+0.48625	* Konsentrasi Manitol * Konsentrasi CP
+0.015417	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.
In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:
1) Normal probability plot of the studentized residuals to check for normality of residuals.
2) Studentized residuals versus predicted values to check for constant error.
3) Externally Studentized Residuals to look for outliers, i.e., influential values.
4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN BI

HASIL UJI ANAVA TERHADAP RESPON *HAUSNER RATIO* DENGAN PROGRAM *DESIGN EXPERT*

Response 2 Hausner ratio

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F
Model	3.183E-003	7	4.548E-004	0.71	0.6622
not significant					
A-Konsentrasi HPMC	*6.000E-004*	*1*	*6.000E-004*	*0.94*	*0.3464*
B-Konsentrasi Manitol	*1.667E-005*	*1*	*1.667E-005*	*0.026*	*0.8736*
C-Konsentrasi CP	*8.167E-004*	*1*	*8.167E-004*	*1.28*	*0.2744*
AB6.667E-005	*1*	*6.667E-005*	*0.10*	*0.7506*	
AC2.667E-004	*1*	*2.667E-004*	*0.42*	*0.5270*	
BC1.350E-003	*1*	*1.350E-003*	*2.12*	*0.1649*	
ABC6.667E-005	*1*	*6.667E-005*	*0.10*	*0.7506*	
Pure Error	0.010	16	6.375E-004		
Cor Total	0.013	23			

The "Model F-value" of 0.71 implies the model is not significant relative to the noise. There is a 66.22 % chance that a "Model F-value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.
In this case there are no significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.025	R-Squared	0.2379
Mean	1.26	Adj R-Squared	-0.0956
C.V. %	2.01	Pred R-Squared	-0.7148
PRESS	0.023	Adeq Precision	2.515

A negative "Pred R-Squared" implies that the overall mean is a better predictor of your response than the current model.

"Adeq Precision" measures the signal to noise ratio. A ratio of 2.52 indicates an inadequate signal and we should not use this model to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	1.26	1	5.154E-003	1.25	1.27	
A-Konsentrasi HPMC	-5.000E-003	1	5.154E-003	-0.016	5.926E-003	1.00
B-Konsentrasi Manitol	8.333E-004	1	5.154E-003	-0.010	0.012	1.00
C-Konsentrasi CP	-5.833E-003	1	5.154E-003	-0.017	5.092E-003	1.00
AB	-1.667E-003	1	5.154E-003	-0.013	9.259E-003	1.00
AC	-3.333E-003	1	5.154E-003	-0.014	7.592E-003	1.00
BC	7.500E-003	1	5.154E-003	-3.426E-003	0.018	1.00
ABC	1.667E-003	1	5.154E-003	-9.259E-003	0.013	1.00

Final Equation in Terms of Coded Factors:

Hausner ratio =
+1.26
-5.000E-003 * A
+8.333E-004 * B
-5.833E-003 * C
-1.667E-003 * A * B
-3.333E-003 * A * C
+7.500E-003 * B * C
+1.667E-003 * A * B * C

Final Equation in Terms of Actual Factors:

Hausner ratio	=
+1.25917	
-5.00000E-003	* Konsentrasi HPMC
+8.33333E-004	* Konsentrasi Manitol
-5.83333E-003	* Konsentrasi CP
-1.66667E-003	* Konsentrasi HPMC * Konsentrasi Manitol
-3.33333E-003	* Konsentrasi HPMC * Konsentrasi CP
+7.50000E-003	* Konsentrasi Manitol * Konsentrasi CP
+1.66667E-003	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.
In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

1) Normal probability plot of the studentized residuals to check for normality of residuals.
2) Studentized residuals versus predicted values to check for constant error.
3) Externally Studentized Residuals to look for outliers, i.e., influential values.
4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon

LAMPIRAN BJ

HASIL UJI ANAVA TERHADAP RESPON KERAPUHANDENGAN PROGRAM *DESIGN EXPERT*

Response 3 Kerapuhan

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	1.19	7	0.17	9.55	0.0001	
significant						
A-Konsentrasi HPMC	*2.042E-004*	*1*	*2.042E-004*	*0.011*	*0.9162*	
B-Konsentrasi Manitol	*0.33*	*1*	*0.33*	*18.67*	*0.0005*	
C-Konsentrasi CP	*0.11*	*1*	*0.11*	*5.89*	*0.0274*	
AB0.12	*1*	*0.12*	*6.82*	*0.0189*		
AC0.021	*1*	*0.021*	*1.18*	*0.2944*		
BC0.61	*1*	*0.61*	*34.19*	*< 0.0001*		
ABC1.204E-003	*1*	*1.204E-003*	*0.067*	*0.7985*		
Pure Error	0.29	16	0.018			
Cor Total	1.48	23				

The Model F-value of 9.55 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise. Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case B, C, AB, BC are significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.13	R-Squared	0.8068
Mean	0.58	Adj R-Squared	0.7223
C.V. %	23.03	Pred R-Squared	0.5653
PRESS	0.64	Adeq Precision	8.853

The "Pred R-Squared" of 0.5653 is in reasonable agreement with the "Adj R-Squared" of 0.7223.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 8.853 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	0.58	1	0.027	0.52	0.64	
A-Konsentrasi HPMC	2.917E-003	1	0.027	-0.055	0.061	1.00
B-Konsentrasi Manitol	-0.12	1	0.027	-0.18	-0.060	1.00
C-Konsentrasi CP	-0.066	1	0.027	-0.12	-8.396E-003	1.00
AB	0.071	1	0.027	0.013	0.13	1.00
AC	0.030	1	0.027	-0.028	0.087	1.00
BC	-0.16	1	0.027	-0.22	-0.10	1.00
ABC	-7.083E-003	1	0.027	-0.065	0.051	1.00

Final Equation in Terms of Coded Factors:

Kerapuhan =
+0.58
+2.917E-003 * A
-0.12 * B
-0.066 * C
+0.071 * A * B
+0.030 * A * C
-0.16 * B * C
-7.083E-003 * A * B * C

Final Equation in Terms of Actual Factors:

Kerapuhan	=
+0.58042	
+2.91667E-003	* Konsentrasi HPMC
-0.11792	* Konsentrasi Manitol
-0.066250	* Konsentrasi CP
+0.071250	* Konsentrasi HPMC * Konsentrasi Manitol
+0.029583	* Konsentrasi HPMC * Konsentrasi CP
-0.15958	* Konsentrasi Manitol * Konsentrasi CP
-7.08333E-003	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.
In the Diagnostics Node, Select Case Statistics from the View Menu.

Proceed to Diagnostic Plots (the next icon in progression). Be sure to look at the:

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3) Externally Studentized Residuals to look for outliers, i.e., influential values.
4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN BK

HASIL UJI ANAVA TERHADAP RESPON WAKTU HANCURDENGAN PROGRAM *DESIGN EXPERT*

Response 4 Waktu hancur

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	11137.68	7	1591.10	8.97	0.0002	
significant						
A-Konsentrasi HPMC	*7031.53*	*1*	*7031.53*	*39.63*	*< 0.0001*	
B-Konsentrasi Manitol	*162.24*	*1*	*162.24*	*0.91*	*0.3532*	
C-Konsentrasi CP	*2646.00*	*1*	*2646.00*	*14.91*	*0.0014*	
AB140.17	*1*	*140.17*	*0.79*	*0.3873*		
AC1115.21	*1*	*1115.21*	*6.29*	*0.0233*		
BC29.04	*1*	*29.04*	*0.16*	*0.6912*		
ABC13.50	*1*	*13.50*	*0.076*	*0.7862*		
Pure Error	2838.85	16	177.43			
Cor Total	13976.53	23				

The Model F-value of 8.97 implies the model is significant. There is only a 0.02% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case A, C, AC are significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	13.32	R-Squared	0.7969
Mean	27.03	Adj R-Squared	0.7080
C.V. %	49.27	Pred R-Squared	0.5430
PRESS	6387.42	Adeq Precision	8.053

The "Pred R-Squared" of 0.5430 is in reasonable agreement with the "Adj R-Squared" of 0.7080.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 8.053 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	27.03	1	2.72	21.27	32.80	
A-Konsentrasi HPMC	17.12	1	2.72	11.35	22.88	1.00
B-Konsentrasi Manitol	-2.60	1	2.72	-8.36	3.16	1.00
C-Konsentrasi CP	10.50	1	2.72	4.74	16.26	1.00
AB-2.42	1	2.72	-8.18	3.35	1.00	
AC6.82	1	2.72	1.05	12.58	1.00	
BC1.10	1	2.72	-4.66	6.86	1.00	
ABC-0.75	1	2.72	-6.51	5.01	1.00	

Final Equation in Terms of Coded Factors:

Waktu hancur =
+27.03
+17.12 * A
-2.60 * B
+10.50 * C
-2.42 * A * B
+6.82 * A * C
+1.10 * B * C
-0.75 * A * B * C

Final Equation in Terms of Actual Factors:

Waktu hancur	=
+27.03333	
+17.11667	* Konsentrasi HPMC
-2.60000	* Konsentrasi Manitol
+10.50000	* Konsentrasi CP
-2.41667	* Konsentrasi HPMC * Konsentrasi Manitol
+6.81667	* Konsentrasi HPMC * Konsentrasi CP
+1.10000	* Konsentrasi Manitol * Konsentrasi CP
-0.75000	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

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4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN BL

HASIL UJI ANAVA TERHADAP RESPON WAKTU BASAHDENGAN PROGRAM *DESIGN EXPERT*

Response 5 Waktu basah

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	13751.11	7	1964.44	4.78	0.0046	
significant						
A-Konsentrasi HPMC	*9282.67*	*1*	*9282.67*	*22.58*	*0.0002*	
B-Konsentrasi Manitol	*0.81*	*1*	*0.81*	*1.962E-003*	*0.9652*	
C-Konsentrasi CP	*2440.17*	*1*	*2440.17*	*5.94*	*0.0269*	
AB873.63	*1*	*873.63*	*2.12*	*0.1643*		
AC47.04	*1*	*47.04*	*0.11*	*0.7396*		
BC380.81	*1*	*380.81*	*0.93*	*0.3502*		
ABC726.00	*1*	*726.00*	*1.77*	*0.2025*		
Pure Error	6578.08	16	411.13			
Cor Total	20329.19	23				

The Model F-value of 4.78 implies the model is significant. There is only a 0.46% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case A, C are significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	20.28	R-Squared	0.6764
Mean	39.72	Adj R-Squared	0.5349
C.V. %	51.05	Pred R-Squared	0.2719
PRESS	14800.68	Adeq Precision	6.054

The "Pred R-Squared" of 0.2719 is not as close to the "Adj R-Squared" of 0.5349 as one might normally expect. This may indicate a large block effect or a possible problem with your model and/or data. Things to consider are model reduction, response transformation, outliers, etc.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 6.054 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	39.72	1	4.14	30.94	48.49	
A-Konsentrasi HPMC	19.67	1	4.14	10.89	28.44	1.00
B-Konsentrasi Manitol	-0.18	1	4.14	-8.96	8.59	1.00
C-Konsentrasi CP	10.08	1	4.14	1.31	18.86	1.00
AB-6.03	1	4.14	-14.81	2.74	1.00	
AC1.40	1	4.14	-7.37	10.17	1.00	
BC3.98	1	4.14	-4.79	12.76	1.00	
ABC-5.50	1	4.14	-14.27	3.27	1.00	

Final Equation in Terms of Coded Factors:

Waktu basah	=
+39.72	
+19.67	* A
-0.18	* B
+10.08	* C
-6.03	* A * B
+1.40	* A * C
+3.98	* B * C
-5.50	* A * B * C

Final Equation in Terms of Actual Factors:

Waktu basah	=
+39.71667	
+19.66667	* Konsentrasi HPMC
-0.18333	* Konsentrasi Manitol
+10.08333	* Konsentrasi CP
-6.03333	* Konsentrasi HPMC * Konsentrasi Manitol
+1.40000	* Konsentrasi HPMC * Konsentrasi CP
+3.98333	* Konsentrasi Manitol * Konsentrasi CP
-5.50000	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

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4) Box-Cox plot for power transformations.

If all the model statistics and diagnostic plots are OK, finish up with the Model Graphs icon.

LAMPIRAN BM

HASIL UJI ANAVA TERHADAP RESPON KEKERASANDENGAN PROGRAM *DESIGN EXPERT*

Response 6 Kekerasan

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	1.69	7	0.24	4.87	0.0042	
significant						
A-Konsentrasi HPMC	*0.48*	*1*	*0.48*	*9.71*	*0.0066*	
B-Konsentrasi Manitol	*0.67*	*1*	*0.67*	*13.45*	*0.0021*	
C-Konsentrasi CP	*0.24*	*1*	*0.24*	*4.84*	*0.0428*	
AB0.11	*1*	*0.11*	*2.15*	*0.1618*		
AC0.060	*1*	*0.060*	*1.21*	*0.2876*		
BC1.667E-003	*1*	*1.667E-003*	*0.034*	*0.8568*		
ABC0.14	*1*	*0.14*	*2.72*	*0.1184*		
Pure Error	0.79	16	0.050			
Cor Total	2.49	23				

The Model F-value of 4.87 implies the model is significant. There is only a 0.42% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case A, B, C are significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	0.22	R-Squared	0.6808
Mean	2.68	Adj R-Squared	0.5411
C.V. %	8.32	Pred R-Squared	0.2817
PRESS	1.78	Adeq Precision	7.519

The "Pred R-Squared" of 0.2817 is not as close to the "Adj R-Squared" of 0.5411 as one might normally expect. This may indicate a large block effect or a possible problem with your model and/or data. Things to consider are model reduction, response transformation, outliers, etc.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 7.519 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	2.67	1	0.045	2.58	2.77	
A-Konsentrasi HPMC	-0.14	1	0.045	-0.24	-0.045	1.00
B-Konsentrasi Manitol	-0.17	1	0.045	-0.26	-0.070	1.00
C-Konsentrasi CP	0.10	1	0.045	3.644E-003	0.20	1.00
AB	0.067	1	0.045	-0.030	0.16	1.00
AC	0.050	1	0.045	-0.046	0.15	1.00
BC	8.333E-003	1	0.045	-0.088	0.10	1.00
ABC	0.075	1	0.045	-0.021	0.17	1.00

Final Equation in Terms of Coded Factors:

Kekerasan =
+2.67
-0.14 * A
-0.17 * B
+0.10 * C
+0.067 * A * B
+0.050 * A * C
+8.333E-003 * B * C
+0.075 * A * B * C

Final Equation in Terms of Actual Factors:

Kekerasan	=
+2.67500	
-0.14167	* Konsentrasi HPMC
-0.16667	* Konsentrasi Manitol
+0.10000	* Konsentrasi CP
+0.066667	* Konsentrasi HPMC * Konsentrasi Manitol
+0.050000	* Konsentrasi HPMC * Konsentrasi CP
+8.33333E-003	* Konsentrasi Manitol * Konsentrasi CP
+0.075000	* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

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LAMPIRAN BN

HASIL UJI ANAVA TERHADAP RESPON RASIO ABSORPSI AIRDENGAN PROGRAM *DESIGN EXPERT*

Response 7 Rasio absorbsi

ANOVA for selected factorial model

Analysis of variance table [Partial sum of squares - Type III]

Source	Sum of Squares	df	Mean Square	F Value	p-value Prob > F	
Model	3121.83	7	445.98	1.54	0.2251	
not significant						
A-Konsentrasi HPMC	*48.17*	*1*	*48.17*	*0.17*	*0.6892*	
B-Konsentrasi Manitol	*1290.67*	*1*	*1290.67*	*4.44*	*0.0511*	
C-Konsentrasi CP	*32.67*	*1*	*32.67*	*0.11*	*0.7417*	
AB816.67	*1*	*816.67*	*2.81*	*0.1130*		
AC384.00	*1*	*384.00*	*1.32*	*0.2671*		
BC541.50	*1*	*541.50*	*1.86*	*0.1910*		
ABC8.17	*1*	*8.17*	*0.028*	*0.8689*		
Pure Error	4646.00	16	290.37			
Cor Total	7767.83	23				

The "Model F-value" of 1.54 implies the model is not significant relative to the noise. There is a 22.51 % chance that a "Model F-value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant.

In this case there are no significant model terms.
Values greater than 0.1000 indicate the model terms are not significant.
If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	17.04	R-Squared	0.4019
Mean	149.42	Adj R-Squared	0.1402
C.V. %	11.40	Pred R-Squared	-0.3457
PRESS	10453.50	Adeq Precision	3.524

A negative "Pred R-Squared" implies that the overall mean is a better predictor of your response than the current model.

"Adeq Precision" measures the signal to noise ratio. A ratio of 3.52 indicates an inadequate signal and we should not use this model to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	149.42	1	3.48	142.04	156.79	
A-Konsentrasi HPMC	-1.42	1	3.48	-8.79	5.96	1.00
B-Konsentrasi Manitol	7.33	1	3.48	-0.040	14.71	1.00
C-Konsentrasi CP	1.17	1	3.48	-6.21	8.54	1.00
AB-5.83	1	3.48	-13.21	1.54	1.00	
AC4.00	1	3.48	-3.37	11.37	1.00	
BC4.75	1	3.48	-2.62	12.12	1.00	
ABC0.58	1	3.48	-6.79	7.96	1.00	

Final Equation in Terms of Coded Factors:

Rasio absorbsi =
+149.42
-1.42 * A
+7.33 * B
+1.17 * C
-5.83 * A * B
+4.00 * A * C
+4.75 * B * C
+0.58 * A * B * C

Final Equation in Terms of Actual Factors:

Rasio absorbsi =
+149.41667
-1.41667 * Konsentrasi HPMC
+7.33333 * Konsentrasi Manitol
+1.16667 * Konsentrasi CP
-5.83333 * Konsentrasi HPMC * Konsentrasi Manitol
+4.00000* Konsentrasi HPMC * Konsentrasi CP
+4.75000* Konsentrasi Manitol * Konsentrasi CP
+0.58333* Konsentrasi HPMC * Konsentrasi Manitol * Konsentrasi CP

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LAMPIRAN BO

CONTOH PERHITUNGAN

Contoh perhitungan Indeks kompresibilitas :

Berat granul dalam gelas ukur : 37,94 g

V sebelum tapped : 100ml

V sesudah tapped : 88 ml

Bobot jenis nyata = $\frac{W_2 - W_1}{V_1(ml)} = \frac{37,94}{100} = 0,37$

Bobot jenis mampat = $\frac{W_2 - W_1}{V_2(ml)} = \frac{37,94}{88} = 0,43$

% kompresibilitas = $\left(1 - \frac{bobot\ jenis\ nyata}{bobot\ jenis\ mampat}\right)$ x 100% = $\left(1 - \frac{0,37}{0,43}\right)$ x

100% = 13,63

$HR = \frac{\rho_{tap}}{\rho_{bulk}} = \frac{0,43}{0,37} = 1,16$

Contoh hasil perhitungan akurasi presisi:

Kons.	Massa (mg)	Abs	Kons (µg/ml)	Teoritis (µg/ml)	Perolehan kembali (%)
100%	100,9	0,254	8,125	8,024	101

Absorbansi = 0,254 → y = 0,0208 + 0,028x

Konsentrasi sample (x) = 8,125

Berat domperidone = 10,03 mg

W matrix = 90,87 mg

W sample = 100,9 mg

Konsentrasi teoritis:

10,03 (dalam 250ml HCl0,1N) = (40,12 ppm x 2 (dipipet)) / 10(ad) = 8,024 ppm

%perolehan kembali = (konsentrasi sample / konsentrasi teoritis) x 100%

= (8,125/ 8,024) x 100 = 101%

%KV = (SD / $X_{rata\text{-}rata}$) x 100= (1,25 / 99,67) x 100% = 1,25

Contoh perhitungan penetapan kadar :

Formula	Wrata-rata (mg)	W sampel (mg)	Abs	Csampel	Wd teoritis (mg)	Wd didapat (mg)	% terlepas
I	105,5	100,2	0,233	7,39	10	9,726	102,4

Absorbansi = 0,233 → y = 0,0208 + 0,028x

Konsentrasi sampel (x) = 7,39 ppm

Berat tablet rata-rata = 105,5

Berat sampel = 100,2

Berat Domperidone = 10 mg

Konsentrasi teoritis =

7,39 x 5(FP)= 36,95 x (250/1000)= (9,2375 mg x 105,5)/100,2 = 9,726 mg

% Perolehan kembali = (9,276mg / 10mg)x 100% = 102,4

KV= (SD / $X_{rata\text{-}rata}$) x 100% = (5,76 / 97,8) x 100% = 5,8%

Contoh perhitungan %obat terlepas:

T30menit

Absorbansi = 0,274 → y= 0,0208 + 0,028x

Csampel = 8,82 ppm

Wpada PK = 9,365

Wt = 8,82 x 0,9 = 7,902

% obat terrlepas = (7,902/9,365) * 100 = 84,76 %

Contoh perhitungan AUC

tn-1 = 25

tn = 30

wtn = 7,938

wtn-1 = 7,812

AUC = ((7,812 + 7,938)/ 2)*(30 – 25) = 39,375

%ED = (jumlah AUC / (30 * Wteoritis)) * 100

= (237,85/(30*90,365))*100 = 84,6

LAMPIRAN BP

TABEL UJI F

Titik Persentase Distribusi F untuk Probabilita = 0,05

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	5.90	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

LAMPIRAN BQ

TABEL UJI r

n	Taraf Signifikan		n	Taraf Signifikan		n	Taraf Signifikan	
	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	10	0,195	0,256
13	0,553	0,684	37	0,325	0,418	12	0,176	0,230
14	0,532	0,661	38	0,320	0,413	15	0,159	0,210
15	0,514	0,641	39	0,316	0,408	17	0,148	0,194
16	0,497	0,623	40	0,312	0,403	20	0,138	0,181
17	0,482	0,606	41	0,308	0,398	30	0,113	0,148
18	0,468	0,590	42	0,304	0,393	40	0,098	0,128
19	0,456	0,575	43	0,301	0,389	50	0,088	0,115
20	0,444	0,561	44	0,297	0,384	60	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 BR

TABEL UJI T

t Table

cum. prob	$t_{.50}$	$t_{.75}$	$t_{.80}$	$t_{.85}$	$t_{.90}$	$t_{.95}$	$t_{.975}$	$t_{.99}$	$t_{.995}$	$t_{.999}$	$t_{.9995}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
df											
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.587
11	0.000	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	4.025	4.437
12	0.000	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	3.930	4.318
13	0.000	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	3.852	4.221
14	0.000	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	3.787	4.140
15	0.000	0.691	0.866	1.074	1.341	1.753	2.131	2.602	2.947	3.733	4.073
16	0.000	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	3.686	4.015
17	0.000	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	3.646	3.965
18	0.000	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	3.610	3.922
19	0.000	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	3.579	3.883
20	0.000	0.687	0.860	1.064	1.325	1.725	2.086	2.528	2.845	3.552	3.850
21	0.000	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	3.527	3.819
22	0.000	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	3.505	3.792
23	0.000	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	3.485	3.768
24	0.000	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	3.467	3.745
25	0.000	0.684	0.856	1.058	1.316	1.708	2.060	2.485	2.787	3.450	3.725
26	0.000	0.684	0.856	1.058	1.315	1.706	2.056	2.479	2.779	3.435	3.707
27	0.000	0.684	0.855	1.057	1.314	1.703	2.052	2.473	2.771	3.421	3.690
28	0.000	0.683	0.855	1.056	1.313	1.701	2.048	2.467	2.763	3.408	3.674
29	0.000	0.683	0.854	1.055	1.311	1.699	2.045	2.462	2.756	3.396	3.659
30	0.000	0.683	0.854	1.055	1.310	1.697	2.042	2.457	2.750	3.385	3.646
40	0.000	0.681	0.851	1.050	1.303	1.684	2.021	2.423	2.704	3.307	3.551
60	0.000	0.679	0.848	1.045	1.296	1.671	2.000	2.390	2.660	3.232	3.460
80	0.000	0.678	0.846	1.043	1.292	1.664	1.990	2.374	2.639	3.195	3.416
100	0.000	0.677	0.845	1.042	1.290	1.660	1.984	2.364	2.626	3.174	3.390
1000	0.000	0.675	0.842	1.037	1.282	1.646	1.962	2.330	2.581	3.098	3.300
z	0.000	0.674	0.842	1.036	1.282	1.645	1.960	2.326	2.576	3.090	3.291
	0%	50%	60%	70%	80%	90%	95%	98%	99%	99.8%	99.9%
	Confidence Level										

LAMPIRAN BS

SERTIFIKAT BAHAN-BAHAN

GUJARAT MICROWAX PRIVATE LIMITED

FLOCEL® 101

Microcrystalline cellulose NF,Ph.Eur.

CERTIFICATE OF ANALYSIS

Batch No: E0849 **Manufacturing Date: November-2012**

Manufacturing Site:Nandasan,India. **Re-evaluation Date: November-2017**

Analysis	Specifications	Reference	Batch Results
Colour	White	ph.Eur.	White
Identification A	Have to correspond	NF,ph.Eur.	Complies
Identification B	Have to correspond	NF,ph.Eur.	Complies
Degree of Polymerisation	Max.350	NF,ph.Eur.	Complies
Solubility	Have to correspond	ph.Eur.	Complies
pH	5.0-7.0	USP,ph.Eur.	6.32
Residue on Ignition	Max.0.05 %	USP,ph.Eur.	0.03%
Loss on Drying	Max.6.0 %	USP,ph.Eur.	3.42%
Heavy Metals	Max.10 ppm	USP	Complies
Conductivity	Max.75 µs/cm	USP,ph.Eur.	44 µs/cm
Water Soluble Substances	Max.0.24 %	USP,ph.Eur.	0.12%
Ether Soluble Substances	Max.0.05 %	USP,ph.Eur.	0.01%
Bulk Density	0.26 to 0.33 g/ml	NF	0.32 g/ml
Sieve Analysis(%Retention)			
60 Mesh (250 µm)	< 1.0 %	Inhouse method	Nil
200 Mesh (75 µm)	< 30.0 %		23.36%
Microbial Analysis			
Total Aerobic Microbial Plate Count	Max. 100 CFU/g	USP,ph.Eur.	20
Total Yeast and Molds Count	Max. 20 CFU/g	USP,ph.Eur.	< 10
Escherichia Coli	Should be Absent	USP,ph.Eur.	Absent
Staphylococcus Aureus	Should be Absent	USP,ph.Eur.	Absent
Salmonella Species	Should be Absent	USP,ph.Eur.	Absent
Pseudomonas Aeruginosa	Should be Absent	USP,ph.Eur.	Absent

The raw materials,manufacturing process and product do not contain any of the solvents listed in Residual Solvents (Ph.Eur. < 5.4 >, USP < 467 >)

For GUJARAT MICROWAX PVT. LTD.

Chemist Quality Control / Jayesh prajapati / DATE : 06/11/2012

megAsetia

PT. MEGASETIA AGUNG KI...

Manufacturer:
INDIA
Gujarat Corporate Office

Sales + Marketing:
WORLDWIDE
JRS PHARMA GMBH+CO.KG

USA + CANADA
JRS PHARMA LP

BASF
The Chemical Company

Certificate of Analysis

BASF South East Asia Pte

Please note that the certificates of analysis are also conveniently available online and around the clock at www.workaccount.basf.com

Fax No 00626452306

PT MEGASETIA AGUNG KIMIA

NO.7-10 RT.014 RW.013 SUNTER AGUNG

14350 TANJUNG PRIOK JAKARTA UTARA

Indonesia

2012-12-18
Fr. Dr.rer.nat. Anna Pfeifer
anna.pfeifer@basf.com
+49 621 60-52890
Certificate No 1027
Page 1 of 3

Certificate of Analysis according to DIN 55350-18-4.2.2

Kollidon® CL / cross povidone

40KG PE-Drum, removable head
Purchase Order/Customer Product#
585/11/2012
000000000050000695

Material	50000695
Order	6000594673 000010
Delivery	6200570755 000010
Lot	48684347G0
Lot/Qty	2000.000 KG
Total	2000.000 KG
Transport	PCIU3856900

Test Parameter	Requirements	UoM	Results
Identification (IR)	must conform		conforms
Peroxides	Max.: 400	mg/kg	60
pH-value (1 % suspension in water)	Min.: 5.0 Max.: 8.0		5.7
Water soluble substances	Max.: 1.5	g/100g	0.2
Water soluble substances (JPE)	must conform (max.75 mg Residue)		conforms
N-Vinylpyrrolidone (GC)	Max.: 10	mg/kg	<2
Arsenic *	must conform (max.: 2 mg/kg)		conforms
Heavy metals *	must conform (max.: 10 mg/kg)		conforms
Loss on drying	Max.: 5.0	g/100g	1.9
Water	Max.: 5.0	g/100g	2.6
Residue on ignition *	must conform (max.: 0.1 g/100g)		conforms

The aforementioned data shall constitute the agreed contractual quality of the product at the time of passing of risk. The data are controlled at regular intervals as part of our quality assurance program. Neither these data nor the properties of product specimens shall imply any legally binding guarantee of certain properties or of fitness for a specific purpose. No liability of ours can be derived therefrom.

This is a computer-generated document. No signature is required.

VASUDHA PHARMA CHEM LTD

VASUDHA PHARMA CHEM LIMITED
78/A, VENGAL RAO NAGAR, HYDERABAD-38
ANDHRA PRADESH, INDIA
PHONE:+91-40-2381 2046, 2371 1717, FAX: 91-40-2381 1576
E-MAIL: vasudha@vasudhapharma.com, Website: www.vasudhapharma.com

Name of the product	:	DOMPERIDONE	Page No.	:	2 of 2
Batch Number	:	BDOM/1106090	A.R.No	:	BDOM/11090
Manufacturing Date	:	JUN 2011	Expiry Date	:	MAY 2016
Dispatch Quantity	:	30.0 Kg.	Analyzed on	:	18/06/2011
Customer Name/ code	:	PT Taterasa			

S.No	TEST	RESULT	SPECIFICATION
3.2	Heavy metals (ppm)	Less than 20	Not more than 20
3.3	Loss on drying(%,w/w)	0.34	Not more than 0.5
3.4	Sulphated Ash(%,w/w)	0.06	Not more than 0.1
3.5	Assay (By titrimetry, %w/w, on dried basis)	99.53	Not less than 99.0 and Not more than 101.0
3.6	Related substances (By HPLC, %)		
	Impurity-A	0.06	Not more than 0.25
	Impurity-B	Not detected	Not more than 0.25
	Impurity-C	Not detected	Not more than 0.25
	Impurity-D	0.14	Not more than 0.25
	Impurity-E	Not detected	Not more than 0.25
	Impurity-F	Not detected	Not more than 0.25
	Unspecified impurities	Not detected	Not more than 0.10
	Total impurity	0.19	Not more than 0.50

REMARKS: The material complies as per the BP specification.

QUALITY ASSURANCE Sign DL-24 RELEASED

PREPARED BY: 21/06/2011 **CHECKED BY :** 21/06/2011 **APPROVED BY:** 23/06/11

Works

M/s. VASUDHA PHARMA CHEM LIMITED, Unit-II, Plot No: 79, I.N.Pharma City, Thanam Village, Parawada Mandalam, Visakhapatnam – 531 021, Andhra Pradesh, India.

J. RETTENMAIER & SÖHNE GMBH + CO KG

Fasern aus der Natur
Fibers designed by Nature

Original

CERTIFICATE OF ANALYSIS

Product:	VIVAPUR
Type:	HPMC K 4M
Item number:	HPMC-K4M-06204
Lot number:	10260-12
Manufacturing date:	January 2012
Shelf life:	at least 36 month from manufacturing date

Test item	Specification	Test-result	Test method
pH-value	5.0 -8.0	7.03	DZE-102
Moisture	max. 5 %	4.58 %	DZE-100
Sulphate ash	max. 1.5 %	0.94 %	DZE-114
Methoxy Content	19 % – 24 %	22.78 %	DZE-110
Hydroxypropoxy Content	4 % – 12 %	6.8 %	DZE-110
Viscosity Brookfield Sol. of 2 % dry basis	3.000 mPas – 5.600 mPas	3.990 mPas	DZE-106

Microbiological analysis

Total plate count	max. 1 x 10^3 cfu/g	< 1 x 10^3 cfu/g	NOM-113-SSA1-1994
Yeasts	max. 1 x 10^2 cfu/g	< 1 x 10^2 cfu/g	NOM-113-SSA1-1994
Moulds	max. 1 x 10^2 cfu/g	< 1 x 10^2 cfu/g	NOM-113-SSA1-1994

Holzmühle, 2012-11-20

Elke Voss
QUALITY CONTROL

DUPLICATA

ROQUETTE

LC 1 EEJ5 CERTIFICATE OF ANALYSIS / COMPLIANCE

PT SIGNA HUSADA

JALAN DAAN MOGOT KM 17

JAKARTA 11840

INDONESIA

PEARLITOL 160 C

CUSTOMER.... SIGNA HUSADA/INDONES

450001 D

INVOICE..... PPY60E1
TONNAGE..... 13.000 KG
CONTRACT.... F92365G
ORDER..... RQF-15/12
BATCH..... E664R
MANUF&TESTED 15 MARCH 2012

EXPIRY DATE. 15 MAR 2017

E.P./U.S.P.

DESCRIPTION WHITE CRYSTALLINE POWDER
ODOURLESS, SWEET TASTE

MEANING TESTED = ANALYZED
MONITORED = MONITORING PLAN
GUARANTEED = COMPLIANCE DATA

APPEARANCE		CONFORM	TESTED
APPEARANCE IN SOLUTION		CONFORM	TESTED
LOSS ON DRYING	%	0,08	TESTED
INFRA-RED		CONFORM	TESTED
MELTING POINT	DEG	166	TESTED
START OF MELTING	DEG	166	TESTED
END OF MELTING	DEG	167	TESTED
SPECIFIC ROTATION(BORATE)	DEG.	+ 23,5	TESTED
SPECIFIC ROT.MOLYBDATE	DEG	+ 140,1	TESTED
CONDUCTIVITY	MICROS/C	0,8	TESTED
REDUCING SUGARS	*(USP)	CONFORM	TESTED
D-MANNITOL BY HPLC	%	99,1	TESTED

PETER GREVEN

Partner der Industrie

QUALITÄTSMANAGEMENT

CERTIFICATE OF ANALYSIS

customer: PT. BRATACO
contact person:
FAX: 0062213522734
your order-number: PTB-1393/VII/07 **our order-number:** 0717837
delivered on: 14.08.2007 **quantity:** 9000
brand: LIGA MAGNESIUM STEARATE MF-2V VEGETABLE **charge-no.** C714048
manufacturing date: 2007-08-07 **expiry date:** 2009-08-07

The product is in accordance with the USP29/NF24/BP2003/Ph.Eur 5th ed./DAB10/JP 14th. ed./FCC 5th. ed.3

No.	parameter	unit	method	lower	Specification	upper	result
	Identification A	aC	Ph.Eur				68
	Identification A	metal reactio	USP/NF				passes test
	Identification B	retention tim	USP/NF				retentions match
	Acidity or	ml 0,01N HCl	Ph.Eur				<0,6
	Alkalinity	ml 0,01 N Na	Ph.Eur				<0,5
	Heavy metals as Pb	ppm	JP				<20
	Lead	ppm	BAE 300-B				<1
	Cadmium	ppm	BAE 300-B				<1
	Nickel	ppm	BAE 300-B				<1
	Sulphate	%	Ph.Eur				<0,5
	Acid value of the fatty acid	mg KOH/g	Ph.Eur				204,5
	Relative content of stearic acid	%	USP/NF				67,5
	Rel. cont. of stearic and palmetic acid	%	USP/NF				99,2
	Aerobic microbial count	cfu/g	USP/NF				<10
	Molds & Yeasts	cfu/g	USP/NF				<10
	Escherichia coli	cfu/10g	USP/NF				absent
	Salmonella Species	cfu/25g	USP/NF				absent
	Organic volatile impurities		USP/NF				meets USP/NF
	Loss on drying	%	BAE 600				3,7
	Magnesium content	%	BAE 200 o				4,8
	Free fatty acid	%	BAE 400				0,5
	Sieve residue at 200 mesh	%	BAE 605				0,4
	Bulk density tapped	g/ml	BAE 611a				0,35
	specific surface area BET	m2/g	USP/NF				8,9
	Contamination		BAE 601				in accordance
	Chloride	ppm	BAE-627				<100

T/C REFERENCE AND
IMPORT APPLICATION NO. 031/030/5217/07B

PETER GREVEN
Peter Greven Nederland B.V.
Edisonstraat 1 NL-5928 PC Venlo

Venlo, 16.08.07

s datas of the obove mentioned delivery are based upon careful test according to the guidlines of our
ility assurance system. They do not release the customer from entry control. Besides we do not garantee
ızial properties for particular applications.
a certificate was issue electronically and does not bear a signature.