

BAB 5

KESIMPULAN

5.1. Kesimpulan

Konsentrasi PVP K-30 berpengaruh secara signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, penurunan kekerasan tablet, peningkatan waktu hancur tablet, peningkatan waktu pembasahan, dan penurunan nilai absorpsi air. Konsentrasi *crospovidone* berpengaruh secara signifikan terhadap peningkatan nilai *Carr's index*, peningkatan nilai *Hausner ratio*, penurunan kekerasan tablet, penurunan waktu hancur, penurunan waktu pembasahan, dan peningkatan nilai rasio absorpsi air. Konsentrasi manitol berpengaruh secara signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, penurunan kerapuhan, penurunan waktu pembasahan tablet, dan penurunan rasio absorpsi air. Interaksi konsentrasi PVP K-30 dan konsentrasi *crospovidone* berpengaruh secara signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, dan penurunan waktu hancur tablet. Interaksi konsentrasi PVP K-30 dan konsentrasi manitol berpengaruh secara signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, peningkatan kekerasan, penurunan waktu hancur tablet, dan penurunan waktu pembasahan. Interaksi konsentrasi *crospovidone* dan konsentrasi manitol berpengaruh signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, dan peningkatan waktu hancur tablet.

Interaksi konsentrasi PVP K-30, konsentrasi *crospovidone*, dan konsentrasi manitol berpengaruh secara signifikan terhadap penurunan nilai *Carr's index*, penurunan nilai *Hausner ratio*, dan peningkatan waktu hancur tablet.

Hasil optimum bahan ko-proses yang diperoleh dengan program optimasi *Design Expert* yaitu formula dengan konsentrasi PVP K-30 10%, konsentrasi *crospovidone* 8%, dan konsentrasi manitol 10% dengan prediksi untuk respon *Carr's index* 19,32%, *Hausner ratio* 1,23, kerapuhan 0,34%, kekerasan 2,62 Kp, waktu hancur 5 detik, waktu pembasahan 28,93 detik, dan rasio absorpsi air 152,50. Respon yang menunjukkan adanya perbedaan yang bermakna dengan hasil teoritis yaitu, waktu pembasahan tablet, tetapi masih memenuhi persyaratan.

Sifat fisik tablet ODT domperidone yang dikempa dengan eksipien ko-proses yang optimum memenuhi syarat sebagai tablet ODT.

5.2. Alur Penelitian Selanjutnya

Dapat dilakukan penelitian lebih lanjut menggunakan bahan aktif selain domperidone untuk membuktikan kesahihan dari hasil optimasi yang didapat.

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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	22,99	21 – 25 = cukup (Siregar, 2010)	1,29	< 1,25
	II	21,94		1,28	(Shervington
	III	22,98		1,29	and
	Rata-rata	22,63		1,29	Shervington,
	± SD	0,60		0,01	1998)
F2	I	20,99	16-20 = cukup baik (Siregar, 2010)	1,26	< 1,25
	II	20,00		1,25	(Shervington
	III	20,99		1,28	and
	Rata-rata	20,66		1,26	Shervington,
	± SD	0,57		0,02	1998)
F3	I	23,98	21 – 25 = cukup (Siregar, 2010)	1,31	< 1,25
	II	25,00		1,33	(Shervington
	III	23,9		1,31	and
	Rata-rata	24,29		1,32	Shervington,
	± SD	0,61		0,01	1998)
F4	I	22,98	21 – 25 = cukup (Siregar, 2010)	1,29	< 1,25
	II	22,98		1,29	(Shervington
	III	21,90		1,28	and
	Rata-rata	22,62		1,29	Shervington,
	± SD	0,62		0,01	1998)
F5	I	23,99	21 – 25 = cukup (Siregar, 2010)	1,31	< 1,25
	II	23,98		1,31	(Shervington
	III	21,98		1,28	and
	Rata-rata	23,32		1,30	Shervington,
	± SD	1,16		0,02	1998)
F6	I	20,98	16-20 = cukup baik 21-25 = cukup (Siregar, 2010)	1,26	< 1,25
	II	20,99		1,26	(Shervington
	III	21,99		1,28	and
	Rata-rata	21,32		1,27	Shervington,
	± SD	0,58		0,01	1998)
F7	I	23,90	21 – 25 = cukup (Siregar, 2010)	1,31	< 1,25
	II	24,98		1,33	(Shervington
	III	24,98		1,33	and
	Rata-rata	24,62		1,32	Shervington,
	± SD	0,62		0,01	1998)
F8	I	19,98	16-20 = cukup baik	1,24	< 1,25
	II	20,00		1,25	(Shervington
	III	17,97		1,21	and
	Rata-rata	19,32		1,23	Shervington,
	± SD	1,17		0,02	1998)

Hasil Uji Kelembapan

Formula	Kelembapan (%)								Persyaratan
	F1	F2	F3	F4	F5	F6	F7	F8	
Replikasi I	3,25	3,50	2,70	3,01	3,70	3,70	3,06	3,78	2 -5% (Ansel, 1989)
Replikasi II	2,12	3,90	3,40	3,90	3,39	3,12	2,51	4,60	
Replikasi III	4,43	2,02	3,10	3,40	2,95	2,03	2,71	4,12	
Rata-rata	3,27	3,14	3,07	3,44	3,35	2,95	2,76	4,17	
±	±	±	±	±	±	±	±	±	
SD	1,16	0,99	0,35	0,45	0,38	0,85	0,28	0,41	

LAMPIRAN B
HASIL UJI KEKERASAN TABLET KO-PROSES

REPLIKASI I

No	Kekerasan Tablet Ko-proses (Kp)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	3,3	2,9	2,6	2,8	2,1	2,2	2,7	2,9
2	3,6	2,2	2,7	2,6	2,0	2,4	2,4	3,1
3	2,8	1,9	2,4	2,6	2,1	2,0	2,5	3,1
4	2,8	2,7	3,5	2,6	2,4	2,2	2,2	2,5
5	2,8	2,3	2,4	2,8	2,0	2,0	2,3	2,0
6	2,8	2,7	2,4	2,5	2,0	2,0	2,7	2,7
7	3,3	2,5	2,4	2,6	1,4	2,0	2,6	2,8
8	3,6	3,0	2,4	2,5	1,3	2,2	2,3	2,9
9	2,8	2,7	3,1	2,6	2,0	2,0	2,2	2,8
10	2,9	1,9	3,2	2,6	1,3	2,3	2,5	2,6
Rata-rata	3,07	2,48	2,71	2,62	1,86	2,13	2,44	2,74
± SD	0,34	0,39	0,41	0,10	0,38	0,15	0,19	0,32
KV	11,07	15,72	15,13	3,82	20,43	7,04	7,79	11,68

REPLIKASI II

No	Kekerasan Tablet Ko-proses (Kp)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	3,2	2,6	2,7	2,8	2,0	2,4	2,3	3,0
2	3,2	2,3	2,4	2,8	2,0	3,2	2,0	2,8
3	3,2	3,3	2,4	3,2	2,4	3,2	2,0	2,8
4	3,6	2,5	2,6	3,3	2,1	3,0	2,2	2,2
5	3,8	2,5	2,5	3,5	1,4	3,0	2,1	2,0
6	3,7	2,4	2,4	3,6	1,5	3,3	2,2	2,8
7	3,5	2,6	3,0	3,9	1,3	3,1	2,6	2,0
8	3,5	2,4	2,2	3,3	1,4	3,1	2,2	3,2
9	3,3	2,7	2,7	3,4	1,3	2,7	2,2	2,3
10	3,3	2,4	2,8	2,8	1,3	2,9	2,2	2,1
Rata-rata	3,43	2,57	2,57	3,26	1,67	2,99	2,20	2,52
± SD	0,22	0,28	0,23	0,37	0,41	0,27	0,17	0,45
KV	6,41	10,89	8,94	11,35	24,55	9,03	7,73	17,86

REPLIKASI III

No	Kekerasan Tablet Ko-proses (Kp)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	3,5	2,5	2,5	3,3	2,0	3,1	2,0	2,8
2	3,4	2,0	2,4	3,4	1,4	3,1	2,1	3,3
3	3,9	2,4	2,4	2,8	1,3	4,0	2,0	2,5
4	3,4	2,4	2,1	3,2	1,3	3,3	2,1	2,6
5	3,8	2,0	2,5	2,7	1,6	3,2	2,3	3,2
6	4,0	2,8	2,4	3,3	1,3	2,8	1,8	2,2
7	4,0	2,4	2,2	3,4	1,4	3,2	2,2	2,0
8	3,5	2,5	2,3	3,3	2,0	3,4	1,9	2,7
9	3,8	2,1	2,2	3,5	1,6	3,3	2,5	2,2
10	3,7	2,1	2,5	3,1	2,5	2,3	2,0	2,5
Rata-rata	3,70	2,32	2,35	3,20	1,64	3,17	2,09	2,60
$\pm$ SD	0,23	0,26	0,14	0,26	0,40	0,43	0,20	0,42
KV	6,22	11,21	5,96	8,13	24,39	13,56	9,57	16,15

LAMPIRAN C
HASIL UJI KERAPUHAN TABLET KO-PROSES

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
F1	I	1,7679	1,7648	0,17	0,36	77,78
	II	1,8703	1,8657	0,24	±	
	III	1,7734	1,7612	0,68	0,28	
F2	I	2,0801	2,0721	0,38	0,37	8,11
	II	1,9430	1,9366	0,33	±	
	III	1,9983	1,9905	0,39	0,03	
F3	I	1,8692	1,8604	0,47	0,41	29,27
	II	1,8065	1,8014	0,28	±	
	III	1,7386	1,7300	0,49	0,12	
F4	I	1,8967	1,8923	0,23	0,34	29,41
	II	1,9168	1,9085	0,43	±	
	III	1,8663	1,8594	0,36	0,10	
F5	I	1,9572	1,9485	0,44	0,51	17,65
	II	1,9645	1,9584	0,61	±	
	III	1,9068	1,8973	0,49	0,09	
F6	I	1,9664	1,9622	0,21	0,14	50
	II	1,7280	1,7256	0,14	±	
	III	1,7675	1,7661	0,08	0,07	
F7	I	1,8558	1,8523	0,18	0,27	48,15
	II	1,8292	1,8252	0,21	±	
	III	1,8278	1,8202	0,41	0,13	
F8	I	1,7252	1,7205	0,27	0,34	44,12
	II	1,8854	1,8757	0,51	±	
	III	1,8584	1,8541	0,23	0,15	

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	3	15	2	5	8	6	2	6
2	2	13	2	6	5	11	2	7
3	3	17	3	4	5	7	2	4
4	2	15	3	4	3	10	2	5
5	3	15	2	6	3	6	2	5
Rata-rata	2,6	15	2,4	5,0	4,8	8,0	2,0	5,4
± SD	0,55	1,41	0,55	1,00	2,05	2,34	0,00	1,14
KV	21,15	9,40	22,92	20	42,71	29,25	0,00	21,11

REPLIKASI II

No	Waktu Hancur Tablet Ko-proses (detik)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	4	10	2	4	3	6	2	5
2	5	12	2	4	3	4	2	4
3	5	18	2	3	3	11	2	5
4	4	11	3	4	3	7	2	5
5	4	10	3	4	4	11	2	4
Rata-rata	4,4	12,2	2,4	3,8	3,2	7,8	2,0	4,6
± SD	0,55	0,35	0,55	0,45	0,45	3,11	0,00	0,55
KV	12,50	2,87	22,92	11,84	14,06	39,87	0,00	11,96

REPLIKASI III

No	Waktu Hancur Tablet Ko-proses (detik)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	4	9	3	7	2	8	2	6
2	6	11	3	6	3	6	2	5
3	4	13	2	10	3	9	2	4
4	4	13	3	7	3	6	2	4
5	5	10	3	8	3	11	2	5
Rata-rata	4,6	11,2	2,8	7,6	2,8	8,0	2,0	4,8
± SD	0,89	1,79	0,45	1,52	0,45	2,12	0,00	0,84
KV	19,35	15,98	16,07	20	16,07	26,50	0,00	17,50

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	7	48	8	9	30	22	7	15
2	7	105	7	10	46	20	8	13
3	9	44	5	10	33	20	7	14
4	11	56	6	11	48	42	8	15
5	8	96	6	9	40	45	7	14
Rata-rata	8,4	69,8	6,4	9,8	39,4	29,8	7,4	14,2
± SD	1,67	28,53	1,14	0,84	7,86	12,57	0,55	0,84
KV	19,88	60,87	17,81	8,57	19,95	42,18	7,43	5,91

REPLIKASI II

No	Waktu Pembasahan Tablet Ko-proses (detik)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	10	64	6	10	29	29	6	37
2	10	55	5	12	45	32	7	36
3	10	74	6	12	27	22	6	23
4	10	48	6	12	46	23	6	41
5	10	78	5	11	46	56	6	40
Rata-rata	10	63,8	5,6	11,4	38,6	32,4	6,2	35,4
± SD	0,00	12,58	0,55	0,89	7,86	13,83	0,45	7,23
KV	0,00	19,72	9,82	7,81	20,36	42,68	7,26	20,42

REPLIKASI III

No	Waktu Pembasahan Tablet Ko-proses (detik)							
	F1	F2	F3	F4	F5	F6	F7	F8
1	12	144	7	18	25	38	6"	50
2	16	183	6	22	32	46	6"	39
3	13	74	8	26	51	52	6"	27
4	13	115	6	17	36	56	6"	30
5	15	78	6	36	37	47	6"	40
Rata-rata	13,8	118,8	6,6	23,8	36,2	47,8	6,0	37,2
± SD	1,64	45,94	0,89	7,69	9,52	6,79	0,00	9,09
KV	11,8	38,67	13,48	33,73	26,30	14,20	0,00	24,44

LAMPIRAN F
HASIL UJI RASIO ABSORPSI AIR TABLET KO-PROSES

REPLIKASI I

Formula	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
F1	87,5	224,9	157,03	167,70 ± 10,67	6,36
	88,2	227,5	157,94		
	86,4	233,3	170,00		
	87,8	237,3	170,27		
	84,3	238,8	183,27		
F2	105,6	270,4	156,06	158,78 ± 4,90	3,09
	99,4	258,9	160,46		
	108,6	277,3	155,34		
	104,3	267,5	156,47		
	107,2	284,7	165,58		
F3	95,0	268,7	182,84	182,59 ± 2,34	1,28
	94,0	262,5	179,25		
	93,7	265,1	182,92		
	93,1	266,1	185,82		
	93,3	263,2	182,10		
F4	93,3	230,2	146,73	167,60 ± 46,18	27,55
	95,1	234,1	146,16		
	92,6	324,3	250,21		
	95,5	236,3	147,43		
	95,2	235,6	147,48		
F5	96,7	249,4	157,91	155,99 ± 2,26	1,45
	96,9	248,9	156,86		
	99,0	255,4	157,98		
	97,2	245,9	152,98		
	96,6	245,6	154,24		
F6	99,1	232,8	134,91	140,64 ± 14,4	10,24
	98,3	230,4	134,38		
	99,0	233,3	135,66		
	99,4	237,9	139,34		
	97,4	252,2	158,93		
F7	94,0	247,8	163,62	162,10 ± 4,90	3,02
	93,2	240,6	158,15		
	92,5	249,8	170,05		
	92,8	240,8	159,48		
	92,2	239,0	159,22		
F8	87,3	180,2	106,41	132,39 ± 21,47	16,22
	87,4	191,6	119,22		
	87,2	218,0	150,00		
	87,9	200,5	128,10		
	86,9	224,4	158,23		

REPLIKASI II

Formula	Wb (mg)	Wa (mg)	Rasio	Rata-rata $\pm$ SD	KV
F1	92,8	264,6	185,13	181,97 $\pm$ 8,32	4,57
	93,4	257,2	175,37		
	92,2	261,5	183,62		
	92,4	251,7	172,40		
	91,3	267,8	193,32		
F2	102,9	265,9	158,41	150,07 $\pm$ 7,20	4,80
	100,9	258,3	155,99		
	103,1	257,9	150,14		
	101,3	246,5	143,33		
	100,5	243,7	142,49		
F3	91,6	243,8	166,16	173,27 $\pm$ 4,91	2,83
	89,5	245,7	174,52		
	90,4	251,6	178,32		
	88,8	240,3	170,61		
	91,1	252,1	176,73		
F4	93,4	231,1	147,43	144,62 $\pm$ 3,87	2,68
	93,7	233,4	149,10		
	95,5	234,0	145,03		
	95,7	229,4	139,71		
	96,3	232,9	141,85		
F5	98,8	252,6	155,67	150,88 $\pm$ 3,38	2,24
	97,3	240,4	147,07		
	98,1	248,0	152,80		
	98,5	246,1	149,85		
	97,3	242,3	149,02		
F6	89,9	203,0	125,81	126,94 $\pm$ 21,69	13,57
	88,7	212,7	139,80		
	89,9	194,8	116,68		
	88,6	175,3	97,85		
	84,1	214,1	154,58		
F7	90,8	228,1	151,21	159,86 $\pm$ 7,20	4,50
	92,5	241,0	160,54		
	90,4	244,7	170,68		
	90,3	235,5	160,80		
	91,1	233,3	156,09		
F8	93,9	238,5	153,99	158,98 $\pm$ 26,23	16,50
	93,4	228,3	144,43		
	93,4	228,4	145,61		
	95,2	233,7	145,48		
	94,4	288,3	205,40		

REPLIKASI III

Formula	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
F1	91,0	231,3	154,17	168,10 ± 12,54	7,46
	87,0	244,8	181,38		
	90,0	244,0	171,11		
	88,3	245,5	178,03		
	87,8	224,6	155,81		
F2	103,9	254,8	145,23	144,75 ± 1,07	0,74
	101,6	247,3	143,40		
	99,8	244,6	145,09		
	103,5	252,5	143,96		
	99,6	245,1	146,08		
F3	86,0	237,4	176,05	178,82 ± 6,19	3,46
	88,3	255,7	189,58		
	87,1	242,3	178,18		
	86,0	237,6	176,28		
	87,0	238,4	174,02		
F4	94,3	235,7	149,95	134,42 ± 12,48	9,28
	93,9	223,0	137,49		
	93,4	210,5	115,74		
	92,8	214,4	131,87		
	93,2	221,7	137,87		
F5	94,7	259,4	173,92	170,90 ± 4,40	2,57
	96,7	262,3	171,25		
	95,1	262,8	176,34		
	95,2	253,8	166,59		
	95,5	254,4	166,39		
F6	90,2	172,5	91,24	108,24 ± 26,56	24,54
	90,8	196,8	116,74		
	89,9	210,0	133,59		
	85,5	195,6	128,77		
	87,2	149,0	70,87		
F7	89,6	234,4	161,61	156,87 ± 8,25	5,26
	90,0	226,1	151,12		
	90,4	242,7	168,47		
	91,1	232,5	155,21		
	91,3	226,4	147,97		
F8	93,2	237,5	154,83	166,14 ± 6,53	3,93
	90,9	243,1	167,44		
	93,1	248,4	167,24		
	93,4	252,6	170,45		
	93,6	253,4	170,73		

LAMPIRAN G

HASIL UJI MUTU FISIK GRANUL KO-PROSES OPTIMUM

Formula Optimum	Kelembapan (%)	Persyaratan (%)	<i>Carr's Index (%)</i>	Persyaratan (%)	<i>Hausner Ratio</i>	Persyaratan
Batch 1	3,28		20		1,25	< 1,25
Batch 2	3,48	2 – 5%	17,99	16 – 20 =	1,21	(Shervington
Batch 3	3,14	(Ansel,	20	cukup baik	1,25	and
Rata-rata	3,30	1989)	19,33	(Siregar,	1,23	Shervington,
± SD	0,17		1,16	2010)	0,02	1998)

LAMPIRAN H

HASIL UJI KEKERASAN TABLET KO-PROSES OPTIMUM

No	Kekerasan Tablet Ko-proses Optimum (Kp)		
	Batch 1	Batch 2	Batch 3
1	2,3	2,2	2,2
2	3,3	2,2	2,6
3	2,4	2,9	2,0
4	2,2	2,2	2,2
5	2,2	2,3	2,5
6	2,4	2,8	2,4
7	2,2	2,3	2,1
8	2,5	2,9	2,4
9	2,4	2,6	2,1
10	2,5	2,8	2,3
Rata-rata	2,44	2,52	2,28
$\pm$ SD	0,32	0,31	0,19
KV	13,11	12,30	8,33

LAMPIRAN I

HASIL UJI KERAPUHAN TABLET KO-PROSES OPTIMUM

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata ± SD	KV
Batch 1	I	1,9144	1,9094	0,26	0,25	4
	II	1,9237	1,9188	0,25	±	
	III	1,9124	1,9076	0,25	0,01	
Batch 2	I	1,8484	1,8454	0,16	0,16	6,25
	II	1,9231	1,9203	0,15	±	
	III	1,8376	1,8344	0,17	0,01	
Batch 3	I	1,9595	1,9571	0,12	0,11	9,09
	II	1,9478	1,9455	0,12	±	
	III	1,9513	1,9493	0,10	0,01	

LAMPIRAN J

HASIL UJI WAKTU HANCUR TABLET KO-PROSES OPTIMUM

No	Waktu Hancur Tablet Ko-proses Optimum (detik)		
	Batch 1	Batch 2	Batch 3
1	6	5	5
2	5	4	6
3	6	5	5
4	4	5	5
5	5	6	6
Rata-rata	5,2	5,0	5,4
$\pm$ SD	0,84	0,71	0,55
KV	16,15	14,20	10,18

LAMPIRAN K

HASIL UJI WAKTU PEMBASAHAN TABLET KO-PROSES

OPTIMUM

No	Waktu Pembasahan Tablet Ko-proses Optimum (detik)		
	Batch 1	Batch 2	Batch 3
1	41	42	30
2	42	45	54
3	21	24	31
4	58	50	55
5	27	23	47
Rata-rata	37,8	36,8	43,4
± SD	14,45	12,48	12,18
KV	38,23	33,91	28,06

LAMPIRAN L
HASIL UJI RASIO ABSORPSI AIR TABLET KO-PROSES OPTIMUM

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Batch 1	95,8	232,6	142,79		
	95,5	260,5	172,77	162,77	
	95,3	250,0	162,33	±	7,26
	94,8	252,5	166,35	11,82	
	94,8	255,6	169,62		
Batch 2	90,3	190,4	110,85		
	91,8	233,7	154,57	143,49	
	91,6	226,3	147,05	±	12,87
	91,3	230,5	153,56	18,47	
	91,2	229,3	151,43		
Batch 3	94,5	230,1	143,49		
	94,7	246,4	160,02	145,25	
	94,5	234,2	147,83	±	6,55
	95,7	224,8	134,90	9,52	
	94,7	227,3	140,02		

LAMPIRAN M

HASIL UJI MUTU FISIK GRANUL ODT DOMPERIDONE

Formula ODT Domperidone	Kelembapan (%)	Persyaratan (%)	Carr's Index (%)	Persyaratan (%)	Hausner Ratio	Persyaratan
Batch 1	3,28		20,99		1,26	< 1,25
Batch 2	3,48	2 – 5%	19,99	16 – 20 =	1,25	(Shervington
Batch 3	3,14	(Ansel,	20,99	cukup baik	1,26	and
Rata-rata	3,30	1989)	20,66	(Siregar,	1,26	Shervington,
± SD	0,17		0,58	2010)	0,01	1998)

LAMPIRAN N

HASIL UJI KESERAGAMAN KANDUNGAN TABLET ODT

DOMPERIDONE

Formula ODT Domperidone	Absorbansi	Bobot Tablet (mg)	Kons. Sampel (µg/ml)	Kadar Bahan Aktif (mg)	Kadar (%)
Batch 1	0,241	99	7,67	9,59	95,9
	0,242	98	7,71	9,64	96,4
	0,235	98	7,46	9,33	93,3
	0,238	99	7,57	9,46	94,6
	0,239	100	7,60	9,50	95,0
	0,246	98	7,85	9,81	98,1
	0,254	101	8,13	10,16	101,6
	0,239	99	7,60	9,50	95,0
	0,237	99	7,53	9,41	94,1
	0,240	98	7,64	9,55	95,5
				X	95,95
				SD	± 2,38
				KV	2,48
Batch 2	0,249	98	7,95	9,94	99,4
	0,244	97	7,78	9,73	97,3
	0,241	97	7,67	9,59	95,9
	0,235	97	7,46	9,33	93,3
	0,251	98	8,02	10,03	100,3
	0,238	98	7,57	9,46	94,6
	0,241	98	7,67	9,59	95,9
	0,243	101	7,74	9,68	96,8
	0,247	100	7,88	9,85	98,5
	0,243	99	7,74	9,68	96,8
				X	96,88
				SD	± 2,13
				KV	2,20
Batch 3	0,236	103	7,50	9,38	93,8
	0,241	102	7,67	9,59	95,9
	0,234	103	7,43	9,29	92,9
	0,248	104	7,92	9,90	99,0
	0,243	104	7,74	9,68	96,8
	0,241	103	7,67	9,59	95,9
	0,239	103	7,60	9,50	95,0
	0,242	102	7,71	9,64	96,4
	0,243	104	7,74	9,68	96,8
	0,246	102	7,85	9,81	98,1
				X	96,06
				SD	± 1,83
				KV	1,91

LAMPIRAN O

HASIL UJI KEKERASAN TABLET ODT DOMPERIDONE

No	Kekerasan Tablet ODT Domperidone (Kp)		
	Batch 1	Batch 2	Batch 3
1	2,7	2,7	2,6
2	2,8	2,4	2,4
3	2,8	2,7	2,3
4	2,6	3,0	2,5
5	2,5	2,5	2,2
6	2,8	2,2	2,8
7	2,9	2,9	2,3
8	2,8	2,3	2,2
9	2,3	2,7	2,5
10	2,8	2,8	2,2
Rata-rata	2,70	2,62	2,40
$\pm$ SD	0,18	0,26	0,20
KV	6,67	9,92	8,33

LAMPIRAN P

HASIL UJI KERAPUHAN TABLET ODT DOMPERIDONE

Formula ODT Domperidone	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata- rata $\pm$ SD	KV
Batch 1	I	2,0067	2,0031	0,18	0,16	37,50
	II	1,9971	1,9953	0,09	$\pm$	
	III	2,1225	2,1181	0,21	0,06	
Batch 2	I	1,9802	1,9754	0,24	0,23	30,43
	II	1,9733	1,9675	0,29	$\pm$	
	III	1,9873	1,9844	0,15	0,07	
Batch 3	I	2,0745	2,0700	0,22	0,23	4,35
	II	1,9836	1,9787	0,24	$\pm$	
	III	2,1362	2,1311	0,23	0,01	

LAMPIRAN Q

HASIL UJI WAKTU HANCUR TABLET ODT DOMPERIDONE

No	Waktu Hancur Tablet ODT Domperidone (detik)		
	Batch 1	Batch 2	Batch 3
1	84	83	77
2	74	73	65
3	70	89	62
4	91	72	72
5	77	65	68
Rata-rata	79,2	76,4	68,8
± SD	8,35	9,53	5,89
KV	10,54	12,47	8,56

LAMPIRAN R
HASIL UJI WAKTU PEMBASAHAN TABLET ODT
DOMPERIDONE

No	Waktu Pembasahan Tablet ODT Domperidone (detik)		
	Batch 1	Batch 2	Batch 3
1	66	96	112
2	80	100	85
3	88	111	81
4	85	92	105
5	64	107	92
Rata-rata	76,6	101,2	95,0
$\pm$ SD	10,99	7,79	13,17
KV	14,34	7,70	13,86

LAMPIRAN S

HASIL UJI RASIO ABSORPSI AIR TABLET ODT DOMPERIDONE

Formula ODT Domperidone	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Batch 1	98,8	197,1	99,49	99,08 ± 14,05	14,18
	98,6	174,0	86,61		
	97,4	208,1	113,65		
	99,7	182,8	83,35		
	97,7	207,4	112,28		
Batch 2	98,6	204,1	106,99	114,43 ± 7,45	6,51
	96,5	203,5	110,88		
	99,2	208,3	109,97		
	96,9	217,9	124,87		
	97,8	214,6	119,42		
Batch 3	102,0	231,3	126,76	119,38 ± 4,50	3,77
	103,2	221,6	114,73		
	102,3	224,8	119,75		
	104,5	227,6	117,80		
	103,6	225,7	117,86		

LAMPIRAN T

HASIL UJI PENETAPAN KADAR TABLET ODT DOMPERIDONE

Formula	Rep.	W sampel (mg)	Abs.	Csampel (µg/ml)	W Bahan Aktif (mg)	W tablet rata-rata (mg)	W Bahan Aktif (mg)	Kadar (%)	Rata-rata ± SD	KV (%)
Batch 1	I	100,9	0,244	7,78	9,73	98,84	9,53	95,3	94,10	1,79
	II	100,3	0,241	7,67	9,59	99,26	9,49	94,9	±	
	III	100,5	0,237	7,53	9,42	98,40	9,22	92,2	1,69	
Batch 2	I	102,3	0,241	7,67	9,59	98,65	9,25	92,5	93,60	1,67
	II	100,2	0,245	7,81	9,76	97,93	9,54	95,4	±	
	II	101,6	0,239	7,60	9,50	99,31	9,29	92,9	1,57	
Batch 3	I	100,3	0,235	7,46	9,33	101,41	9,43	94,3	95,0	0,85
	II	101,7	0,236	7,50	9,38	102,95	9,49	94,9	±	
	III	100,8	0,238	7,57	9,45	102,22	9,59	95,9	0,81	
Pembanding 1	1	100,2	0,231	7,32	9,15	109,0	9,95	99,5	99,23	0,64
	2	100,8	0,234	7,42	9,28	108,3	9,97	99,7	±	
	3	100,5	0,229	7,25	9,06	109,3	9,85	98,5	0,64	
Pembanding 2	1	100,6	0,236	7,49	9,37	104,0	9,69	96,9	98,87	1,81
	2	100,8	0,235	7,46	9,33	107,3	9,93	99,3	±	
	3	100,2	0,238	7,56	9,46	106,3	10,04	100,4	1,79	

Keterangan: Pembanding 1 = tablet generik domperidone

Pembanding 2 = ODT domperidone dengan nama dagang

LAMPIRAN U
HASIL UJI DISOLUSI ODT DOMPERIDONE

Hasil Uji Disolusi Batch 1

Rep.	t (menit)	Abs	C (µg/ml)	Wt (mg)	% obat terlepas	AUC (µg menit / ml)
I	1	0,196	6,10	5,49	58,34	2,75
	2	0,225	7,11	6,39	67,91	5,95
	4	0,235	7,46	6,71	71,31	13,12
	6	0,257	8,23	7,41	78,75	14,12
	8	0,250	7,99	7,19	76,41	14,59
	10	0,253	8,09	7,28	77,36	14,47
	15	0,245	7,81	7,03	74,71	35,78
	20	0,241	7,67	6,90	73,33	34,84
	25	0,238	7,57	6,81	72,37	34,29
	30	0,244	7,78	7,00	74,39	34,52
	Σ AUC					204,43
	% ED					72,42 %
II	1	0,234	7,43	6,69	71,09	3,34
	2	0,259	8,30	7,47	79,38	7,08
	4	0,260	8,33	7,50	79,70	14,97
	6	0,272	8,75	7,88	83,74	15,38
	8	0,270	8,68	7,81	83,00	15,69
	10	0,269	8,65	7,79	82,78	15,60
	15	0,265	8,51	7,66	81,40	38,60
	20	0,271	8,72	7,85	83,42	38,76
	25	0,268	8,61	7,75	82,36	38,99
	30	0,264	8,47	7,62	80,98	38,45
	Σ AUC					226,86
	% ED					80,36 %
III	1	0,217	6,84	6,16	65,46	3,08
	2	0,266	8,54	7,69	81,72	6,92
	4	0,271	8,72	7,85	83,42	15,53
	6	0,276	8,89	8,00	85,02	15,85
	8	0,278	8,96	8,06	85,65	16,07
	10	0,274	8,82	7,94	84,38	16,01
	15	0,277	8,93	8,04	85,44	39,93
	20	0,276	8,89	8,00	85,02	40,09
	25	0,281	9,07	8,16	86,72	40,41
	30	0,269	8,65	7,79	82,78	39,86
	Σ AUC					233,74
	% ED					82,79 %

Hasil Uji Disolusi Batch 2

Rep.	t (menit)	Abs	C (µg/ml)	Wt (mg)	% obat terlepas	AUC (µg menit / ml)
I	1	0,251	8,02	7,22	77,14	3,61
	2	0,259	8,30	7,47	79,81	7,34
	4	0,281	9,07	8,16	87,18	15,63
	6	0,279	8,99	8,09	86,43	16,26
	8	0,274	8,82	7,94	84,83	16,04
	10	0,286	9,24	8,32	88,89	16,26
	15	0,282	9,10	8,19	87,50	41,27
	20	0,274	8,82	7,94	84,83	40,33
	25	0,277	8,93	8,04	85,90	39,93
	30	0,274	8,82	7,94	84,83	39,93
					Σ AUC	236,60
					% ED	83,81 %
II	1	0,270	8,68	7,81	83,44	3,91
	2	0,262	8,40	7,56	80,77	7,69
	4	0,280	9,03	8,13	86,86	15,69
	6	0,279	8,99	8,09	86,43	16,22
	8	0,272	8,75	7,88	84,19	15,97
	10	0,281	9,07	8,16	87,18	16,04
	15	0,281	9,07	8,16	87,18	40,80
	20	0,282	9,10	8,19	87,50	40,88
	25	0,278	8,96	8,06	86,11	40,64
	30	0,268	8,61	7,75	82,80	39,54
					Σ AUC	237,38
					% ED	84,08 %
III	1	0,223	7,39	6,65	71,05	3,17
	2	0,229	7,25	6,53	69,76	6,43
	4	0,247	7,88	7,09	75,75	13,62
	6	0,263	8,44	7,60	81,20	14,69
	8	0,263	8,44	7,60	81,20	15,19
	10	0,261	8,37	7,53	80,45	15,13
	15	0,263	8,44	7,60	81,20	37,82
	20	0,262	8,40	7,56	80,77	37,90
	25	0,269	8,65	7,79	83,23	38,37
	30	0,257	8,23	7,41	79,17	37,97
					Σ AUC	220,29
					% ED	78,03 %

Hasil Uji Disolusi Batch 3

Rep.	t (menit)	Abs	C (µg/ml)	Wt (mg)	% obat terlepas	AUC (µg menit / ml)
I	1	0,244	7,78	7,00	73,68	3,50
	2	0,267	8,58	7,72	81,26	7,36
	4	0,274	8,82	7,94	83,58	15,66
	6	0,286	9,24	8,32	87,58	16,26
	8	0,263	8,44	7,60	80,00	15,91
	10	0,253	8,09	7,28	76,63	14,88
	15	0,293	9,48	8,53	89,79	39,54
	20	0,308	10,00	9,00	94,74	43,86
	25	0,270	8,68	7,81	82,21	42,05
	30	0,266	8,54	7,69	80,95	38,76
					Σ AUC	237,77
					% ED	84,23 %
II	1	0,266	8,54	7,69	80,95	3,84
	2	0,264	8,47	7,62	80,21	7,66
	4	0,261	8,37	7,53	79,26	15,16
	6	0,280	9,03	8,13	85,58	15,66
	8	0,266	8,54	7,69	80,95	15,82
	10	0,269	8,65	7,79	82,00	15,47
	15	0,282	9,10	8,19	86,21	39,93
	20	0,278	8,96	8,06	84,84	40,64
	25	0,271	8,72	7,85	82,63	39,78
	30	0,294	9,52	8,57	90,21	41,03
					Σ AUC	235,00
					% ED	83,24 %
III	1	0,229	7,25	6,53	68,74	3,26
	2	0,244	7,78	7,00	73,68	6,76
	4	0,251	8,02	7,22	76,00	14,22
	6	0,264	8,47	7,62	80,21	14,84
	8	0,261	8,37	7,53	79,26	15,16
	10	0,263	8,44	7,60	80,00	15,13
	15	0,263	8,44	7,60	80,00	37,97
	20	0,260	8,33	7,50	78,95	37,74
	25	0,262	8,40	7,56	79,58	37,66
	30	0,264	8,47	7,62	80,21	37,97
					Σ AUC	220,73
					% ED	78,18 %

Hasil Uji Disolusi Tablet Pembanding 1 (Obat Generik)

Rep.	t (menit)	Abs	C (µg/ml)	Wt (mg)	% obat terlepas	AUC (µg menit / ml)
I	1	0,058	1,29	1,17	11,79	0,58
	2	0,139	4,12	3,71	37,40	0,24
	4	0,202	6,31	5,68	57,26	9,39
	6	0,201	6,28	5,65	56,96	11,33
	8	0,226	7,15	6,43	64,82	12,08
	10	0,294	9,52	8,57	86,39	15,00
	15	0,238	7,57	6,81	68,65	38,45
	20	0,246	7,85	7,06	71,17	34,68
	25	0,246	7,85	7,06	71,17	35,31
	30	0,248	7,92	7,12	71,77	35,47
					Σ AUC	194,72
					% ED	65,43%
II	1	0,053	1,12	1,01	10,18	0,50
	2	0,119	3,42	3,08	31,05	2,04
	4	0,184	5,69	5,12	51,61	8,20
	6	0,228	7,22	6,50	65,52	11,61
	8	0,214	6,73	6,06	61,09	12,56
	10	0,265	8,51	7,66	77,22	13,72
	15	0,228	7,22	6,50	65,52	35,39
	20	0,251	8,02	7,22	72,78	34,29
	25	0,250	7,99	7,19	72,48	36,01
	30	0,258	8,26	7,44	75,0	36,56
					Σ AUC	190,88
					% ED	64,14%
III	1	0,057	1,26	1,13	11,39	0,57
	2	0,125	3,63	3,27	32,96	2,20
	4	0,209	6,56	5,90	59,48	9,17
	6	0,221	6,98	6,28	63,31	12,18
	8	0,224	7,08	6,37	64,21	12,65
	10	0,219	6,91	6,21	62,60	12,59
	15	0,248	7,92	7,12	71,77	33,35
	20	0,259	8,30	7,47	75,30	36,48
	25	0,251	8,02	7,22	72,78	36,72
	30	0,244	7,78	7,00	70,56	35,54
					Σ AUC	191,45
					% ED	64,33%

Hasil Uji Disolusi Tablet Pembanding 2 (Obat dengan Nama Dagang)

Rep.	t (menit)	Abs	C (µg/ml)	Wt (mg)	% obat terlepas	AUC (µg menit / ml)
I	1	0,079	2,03	1,82	18,40	0,91
	2	0,124	3,59	3,24	32,76	2,53
	4	0,168	5,13	4,62	46,71	7,85
	6	0,228	7,22	6,50	65,72	11,11
	8	0,205	6,42	5,78	58,44	12,27
	10	0,206	6,45	5,81	58,75	11,58
	15	0,230	7,29	6,56	66,33	30,92
	20	0,230	7,29	6,56	66,33	32,80
	25	0,232	7,36	6,62	66,94	32,96
	30	0,244	7,78	7,00	70,78	34,05
					Σ AUC	176,99
					% ED	59,11%
II	1	0,077	1,96	1,76	17,80	0,88
	2	0,144	4,29	3,86	39,03	2,81
	4	0,171	5,23	4,71	47,62	8,57
	6	0,198	6,17	5,56	56,22	10,27
	8	0,217	6,84	6,15	62,18	11,71
	10	0,226	7,15	6,43	65,02	12,59
	15	0,232	7,36	6,62	66,94	32,64
	20	0,241	7,67	6,90	69,77	33,82
	25	0,225	7,11	6,40	64,71	33,27
	30	0,237	7,53	6,78	68,55	32,96
					Σ AUC	179,51
					% ED	60,50%
III	1	0,076	1,92	1,73	17,49	0,86
	2	0,121	3,49	3,14	31,75	2,44
	4	0,188	5,83	5,24	52,98	8,38
	6	0,210	6,59	5,93	59,96	11,18
	8	0,216	6,80	6,12	61,88	12,05
	10	0,219	6,91	6,21	62,79	12,34
	15	0,226	7,15	6,43	65,01	31,62
	20	0,238	7,57	6,81	68,86	33,11
	25	0,231	7,32	6,59	66,63	33,51
	30	0,242	7,71	6,94	70,17	33,82
					Σ AUC	179,31
					% ED	60,43%

LAMPIRAN V

HASIL UJI STABILITAS TABLET KO-PROSES OPTIMUM

Hasil Uji Stabilitas Kekerasan Tablet Ko-proes Optimum

No	Kekerasan Tablet Ko-proses Optimum (Kp)		
	Batch 1	Batch 2	Batch 3
1	2,8	2,2	2,6
2	2,5	2,4	2,0
3	2,4	2,4	2,6
4	2,3	2,2	2,2
5	2,3	2,2	2,2
6	2,8	2,2	2,4
7	2,3	2,6	2,1
8	2,5	2,3	2,2
9	2,7	2,3	2,2
10	2,9	2,4	2,2
Rata-rata	2,55	2,32	2,27
$\pm$ SD	0,23	0,13	0,20
KV	9,02	5,60	8,81

Hasil Uji Stabilitas Kerapuhan Tablet Ko-proses Optimum

Formula Optimum	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata $\pm$ SD	KV
Batch 1	I	1,9463	1,940	0.32	0,33	24,24
	II	1,9576	1,9496	0.41	$\pm$	
	III	1,9386	1,9336	0.26	0,08	
Batch 2	I	1,8584	1,8550	0.18	0,18	27,78
	II	1,8736	1,8712	0.13	$\pm$	
	III	1,8836	1,8793	0.23	0,05	
Batch 3	I	1,9631	1,9631	0.22	0,20	30
	II	1,9971	1,9921	0.25	$\pm$	
	III	1,9826	1,9798	0.14	0,06	

Hasil Uji Stabilitas Waktu Hancur Tablet Ko-proses Optimum

No	Waktu Hancur Tablet Ko-proses Optimum (detik)		
	Batch 1	Batch 2	Batch 3
1	5	5	5
2	5	6	6
3	5	5	5
4	7	6	5
5	5	5	5
Rata-rata	5,4	5,4	5,2
± SD	0,89	0,55	0,45
KV	16,48	10,19	8,65

Hasil Uji Stabilitas Waktu Pembasahan Tablet Ko-proses Optimum

No	Waktu Pembasahan Tablet Ko-proses Optimum (detik)		
	Batch 1	Batch 2	Batch 3
1	21	25	33
2	32	28	36
3	31	37	46
4	23	29	32
5	23	23	45
Rata-rata	26,0	28,4	38,4
± SD	5,10	5,34	6,66
KV	19,62	18,80	17,34

Hasil Uji Stabilitas Rasio Absorpsi Air Tablet Ko-proses Optimum

Formula Optimum	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Batch 1	94,7	249,1	163,04	164,93 ± 4,81	2,92
	95,8	259,2	170,56		
	97,7	252,3	158,24		
	97,7	258,3	164,38		
	97,6	262,0	168,44		
Batch 2	92,8	241,5	160,24	147,46 ± 11,93	8,09
	91,6	229,4	150,44		
	90,2	231,2	156,32		
	92,8	220,8	137,93		
	90,8	211,0	132,38		
Batch 3	99,1	246,6	148,84	148,87 ± 7,52	5,05
	94,1	222,6	136,56		
	95,5	240,3	151,62		
	94,2	242,0	156,90		
	98,4	246,4	150,41		

LAMPIRAN W
HASIL UJI STABILITAS TABLET ODT DOMPERIDONE

Hasil Uji Stabilitas Kekerasan Tablet ODT Domperidone

No	Kekerasan Tablet ODT DOMperidone (Kp)		
	Batch 1	Batch 2	Batch 3
1	2,5	2,7	2,6
2	2,7	2,7	2,2
3	2,5	2,8	2,4
4	2,3	2,9	2,3
5	2,5	2,8	2,3
6	2,7	2,4	2,3
7	2,9	2,2	2,1
8	2,6	2,4	2,3
9	2,4	2,8	2,1
10	2,3	2,8	2,2
Rata-rata	2,54	2,65	2,28
$\pm$ SD	0,19	0,23	0,15
KV	7,48	8,68	6,58

Hasil Uji Stabilitas Kerapuhan Tablet ODT Domperidone

Formula ODT Domperidone	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	Rata-rata $\pm$ SD	KV
Batch 1	I	1,9190	1,9143	0,24	0,25	36
	II	1,9344	1,9313	0,16	$\pm$	
	III	1,9297	1,9226	0,34	0,09	
Batch 2	I	1,9940	1,9880	0,30	0,30	13,3
	II	1,9893	1,9825	0,34	$\pm$	
	III	1,9937	1,9887	0,25	0,04	
Batch 3	I	2,0825	2,0752	0,35	0,37	62,16
	II	2,1327	2,1294	0,15	$\pm$	
	III	2,1691	2,1557	0,60	0,23	

Hasil Uji Stabilitas Waktu Hancur Tablet ODT Domperidone

No	Waktu Hancur Tablet ODT Domperidone (detik)		
	Batch 1	Batch 2	Batch 3
1	82	87	59
2	78	69	71
3	73	72	58
4	78	83	76
5	76	70	74
Rata-rata	77,4	76,2	67,6
± SD	3,29	8,23	8,5
KV	4,25	10,8	12,57

Hasil Uji Stabilitas Waktu Pembasahan Tablet ODT Domperidone

No	Waktu Pembasahan Tablet ODT Domperidone (detik)		
	Batch 1	Batch 2	Batch 3
1	43	96	86
2	56	90	95
3	46	101	103
4	42	91	88
5	55	104	81
Rata-rata	48,4	96,4	90,6
± SD	6,66	6,11	8,56
KV	13,76	6,34	9,45

Hasil Uji Stabilitas Rasio Absorpsi Air Tablet ODT Domperidone

Formula ODT Domperidone	Wb (mg)	Wa (mg)	Rasio	Rata-rata ± SD	KV
Batch 1	96,3	180,1	87,02	100,82 ± 13,55	13,44
	99,1	192,7	94,45		
	100,9	219,7	117,24		
	100,6	193,2	92,05		
	96,8	206,5	113,33		
Batch 2	98	210,9	115,20	121,67 ± 11,71	9,62
	98,2	224,2	128,31		
	96,7	201,8	108,69		
	98	213,4	117,76		
	99	236,0	138,38		
Batch 3	104	234,8	125,77	124,26 ± 3,20	2,58
	104,7	237,0	126,36		
	106,2	236,1	122,32		
	102	224,0	119,61		
	102,1	232,0	127,23		

LAMPIRAN X

CONTOH PERHITUNGAN

Contoh perhitungan Indeks kompresibilitas :

Formula 1 replikasi 1

Berat gelas ukur : 106,82 g (W_1)

Berat gelas ukur + isi : 138,83 g (W_2)

Berat granul dalam gelas ukur : 32,01 g

V sebelum tapped (V_1) = 100ml, V sesudah tapped (V_2) = 77 ml

$$\text{Bobot jenis nyata} = \frac{W_2 - W_1}{V_1 (ml)} = \frac{32,01}{100} = 0,3201$$

$$\text{Bobot jenis mampat} = \frac{W_2 - W_1}{V_2 (ml)} = \frac{32,01}{77} = 0,4157$$

$$\% \text{ kompresibilitas} = \left(1 - \frac{\text{bobot jenis nyata}}{\text{bobot jenis mampat}} \right) \times 100\% = \left(1 - \frac{0,3201}{0,4157} \right) \times 100\% = 22,99\%$$

$$HR = \frac{\rho_{tap}}{\rho_{bulk}} = \frac{0,4157}{0,3201} = 1,29$$

Contoh hasil perhitungan akurasi presisi:

Replikasi I

Kons.	Massa (mg)	Abs	Kons (µg/ml)	Teoritis (µg/ml)	Perolehan kembali (%)
100%	100,2	0,250	7,989	8,032	99,46

Absorbansi = 0,250 → $y = 0,0208 + 0,028x$

Konsentrasi sample (x) = 7,989

Berat domperidone = 100,5 mg

W matrix = 902,3 mg

W sample = 100,2 mg

Konsentrasi teoritis:

10,04 (dalam 250ml HCl0,1N) = (40,16 ppm x 2 (dipipet)) / 10(ad) = 8,032 ppm

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

$$= (7,989 / 8,032) \times 100 = 99,46\%$$

%KV = (SD / $X_{rata-rata}$) x 100 = (0,86 / 99,76) x 100% = 0,86

Contoh perhitungan penetapan kadar :

Batch 1 replikasi 1

Formula	Rep.	W sampel (mg)	Abs.	Csampel (µg/ml)	W Bahan Aktif (mg)	W tablet rata-rata (mg)	W Bahan Aktif (mg)	Kadar (%)
Batch 1	I	100,9	0,244	7,78	9,73	98,84	9,53	95,3

Absorbansi = 0,244 → $y = 0,0208 + 0,028x$

Konsentrasi sampel (x) = 7,78 ppm

Konsentrasi pengamatan = 7,78 ppm x 5(FP) x (250 ml/1000) = 9,73 mg

Berat tablet rata-rata = 98,84 mg

Berat sampel = 100,9 mg

Berat Domperidone = $98,84 / 100,9 \times 9,73 \text{ mg} = 9,53 \text{ mg}$

% Perolehan kembali = (9,53 mg / 10 mg) x 100% = 95,3 %

KV = (SD / $X_{rata-rata}$) x 100% = (1,69 / 94,1) x 100% = 1,79 %

Contoh perhitungan % obat terlepas:

Batch 1 replikasi 1 t = 30menit

Absorbansi = 0,244 $\rightarrow y = 0,0208 + 0,028x$

$C_{\text{sampel}} = 7,74 \text{ ppm}$

W pada PK = 9,41 mg

$W_t = 7,74 \text{ ppm} \times 0,9 \text{ L} = 6,97 \text{ mg}$

$\% \text{ obat terlepas} = (6,97 \text{ mg} / 9,41 \text{ mg}) \times 100 = 74,07 \%$

Contoh perhitungan AUC pada menit 30

$t_{n-1} = 25$

$t_n = 30$

$W_{t_n} = 7,00 \text{ mg}$

$W_{t_{n-1}} = 6,81 \text{ mg}$

$AUC = ((7,00 + 6,81) / 2) \times (30 - 25) = 34,53 \text{ } \mu\text{g menit/ml}$

$\%ED = (\sum AUC / L. \text{ persegi}) \times 100 = (204,43 / (30\text{menit} \times 9,41\text{mg})) \times 100\% = 72,42\%$

LAMPIRAN Y

SERTIFIKAT BAHAN

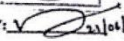
DOMPERIDONE

 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
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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.

PREPARED BY:  21/06/2011	CHECKED BY:  21/06/2011	APPROVED BY:  21/06/2011
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Wacko

M/s. VASUDHA PHARMA CHEM LIMITED, Unit-II, Plot No. 79, J.N. Pharma City, Thanem Village, Panwada Madanlam, Visakhapatnam - 531 021, Andhra Pradesh, India.

CROSPROVIDONE



Certificate of Analysis
BASF South East Asia Pte Ltd

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

Kolidon® CL / Crospovidone

40KG PE-Drum, removable head
Purchase Order/Customer Product#
585/11/2012
00000000050000695

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	1.0
Water	Max.: 5.0	g/100g	2.6
Residue on ignition *	must conform (max.: 8.1 g/100g)		conforms

The aforementioned data shall constitute the agreed contractual quality of the product at the time of placing 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.

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MANITOL

DUPLICATA



LC 1 EEJ5 CERTIFICATE OF ANALYSIS / COMPLIANCE

PAGE 1

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

FLOCEL® 101

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 K...

Manufacturer:
INDIA
Gujarat Corporate Office

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

USA + CANADA
JRS PHARMA LP

PVP K-30



The Chemical Company

Certificate of Analysis

BASF South East Asia Pte Ltd

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

Fax No 0062000216452306

PT MEGASETIA AGUNG KIMIA

2011-10-13

SUNTER AGUNG PODO MORO TANJUNG PRIOK

BASF CORPORATION

14350 JAKARTA UTARA

Certificate No 2025

Indonesia

Page 3 of 4

Certificate of Analysis according to DIN 55350-18-4.2.2

Povidone K30 USP.

Material

50660727

45KG Fibre drum

Order

132763834 000010

Purchase Order/Customer Product#

Delivery

802725182 000001

31608/2011

Lot

G12076SS0

50660727

Lot/Qty

4410.000 KG

Total

9000.000 KG

Characteristic/Method	UOM	Result	Specification
Acetaldehyde	ppm	189	<=500
Hydrazine	ppm	< 1	<=1
K ⁺ value	%	30.1	27.8-32.4
Lead	ppm	< 18	<=18
Microbiology Status		Conforms	
Nitrogen	Weight %	12.3	11.5-12.8
pH (5% in water)		3.5	3.0-7.0
Identification - Dichromate Test		ID DICHRONATE TEST COMPLIES	
Identification - Iodine Test		ID IODINE TEST COMPLIES	
PVP ID - Thiocyanate		ID THIOCYANATE TEST COMPLIES	
PURIC ACID	Weight %	0.2	<=0.5
Sulfated Ash / Residue on Ignition	Weight %	< 0.1	<=0.1
N-vinylpyrrolidone (NVP)	ppm	< 1	<=18
Water	Weight %	3.4	<=5.0

Manufacturing Date: 26.07.2011

Povidone K30 USP meets the requirements of the current monograph for Povidone in USP.

Manufacturer: BASF Corporation
8407 River Road
Gelsmar, LA 70724

Product Retest Date is 24 months from Date of Manufacture

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.

LAMPIRAN Z

TABEL F

Titik Persentase Distribusi F untuk Probabilitas = 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	5.96	5.94	5.91	5.89	5.87	5.86
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.66	4.64	4.62
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.98	3.96	3.94
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.55	3.53	3.51
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.05	3.03	3.01
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.76	2.74	2.72
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.66	2.64	2.62
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.58	2.55	2.53
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.51	2.48	2.46
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.40
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.40	2.37	2.35
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.22	2.20
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.22	2.20	2.18
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.20	2.17	2.15
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.20	2.18	2.15	2.13
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.15	2.13	2.11
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.20	2.16	2.14	2.11	2.09
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.17	2.13	2.10	2.08	2.06
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.10	2.08	2.05	2.03
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01
31	4.16	3.30	2.91	2.68	2.52	2.41	2.32	2.25	2.20	2.15	2.11	2.08	2.05	2.03	2.00
32	4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14	2.10	2.07	2.04	2.01	1.99
33	4.14	3.28	2.89	2.66	2.50	2.39	2.30	2.23	2.18	2.13	2.09	2.06	2.03	2.00	1.98
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12	2.08	2.05	2.02	1.99	1.97
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11	2.07	2.04	2.01	1.99	1.96
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11	2.07	2.03	2.00	1.98	1.95
37	4.11	3.25	2.86	2.63	2.47	2.36	2.27	2.20	2.14	2.10	2.06	2.02	2.00	1.97	1.95
38	4.10	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.99	1.96	1.94
39	4.09	3.24	2.85	2.61	2.46	2.34	2.26	2.19	2.13	2.08	2.04	2.01	1.98	1.95	1.93
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.97	1.95	1.92
41	4.08	3.23	2.83	2.60	2.44	2.33	2.24	2.17	2.12	2.07	2.03	2.00	1.97	1.94	1.92
42	4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.03	1.99	1.96	1.94	1.91
43	4.07	3.21	2.82	2.59	2.43	2.32	2.23	2.16	2.11	2.06	2.02	1.99	1.96	1.93	1.91
44	4.06	3.21	2.82	2.58	2.43	2.31	2.23	2.16	2.10	2.05	2.01	1.98	1.95	1.92	1.90
45	4.06	3.20	2.81	2.58	2.42	2.31	2.22	2.15	2.10	2.05	2.01	1.97	1.94	1.92	1.89

LAMPIRAN AA

TABEL 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 AB

TABEL 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 AC

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

ANTAR FORMULA

(*One Way Anova*)

Descriptives

Carrs_index

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	22.6367	.60335	.34835	21.1379	24.1355	21.94	22.99
F2	3	20.6600	.57158	.33000	19.2401	22.0799	20.00	20.99
F3	3	24.2933	.61330	.35409	22.7698	25.8168	23.90	25.00
F4	3	22.6200	.62354	.36000	21.0710	24.1690	21.90	22.98
F5	3	23.3167	1.15760	.66834	20.4410	26.1923	21.98	23.99
F6	3	21.3200	.58026	.33501	19.8786	22.7614	20.98	21.99
F7	3	24.6200	.62354	.36000	23.0710	26.1690	23.90	24.98
F8	3	19.3167	1.16629	.67336	16.4194	22.2139	17.97	20.00
Total	24	22.3479	1.85536	.37872	21.5645	23.1314	17.97	25.00

Test of Homogeneity of Variances

Carrs_index

Levene Statistic	df1	df2	Sig.
1.763	7	16	.164

ANOVA					
Carrs_index					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	69.411	7	9.916	16.251	.000
Within Groups	9.763	16	.610		
Total	79.174	23			

Keterangan :

$F_{hitung} (16,251) > F_{tabel (0,05) (7,16)} (2,66)$, maka H_0 ditolak dan ada perbedaan bermakna antar formula. Rata-rata *Carr's index* granul ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula

Multiple Comparisons

Carrs_index
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	1.97667	.63780	.097	-.2315	4.1848
	F3	-1.65667	.63780	.226	-3.8648	.5515
	F4	.01667	.63780	1.000	-2.1915	2.2248
	F5	-.68000	.63780	.955	-2.8882	1.5282
	F6	1.31667	.63780	.474	-.8915	3.5248
	F7	-1.98333	.63780	.095	-4.1915	.2248
	F8	3.32000*	.63780	.002	1.1118	5.5282
F2	F1	-1.97667	.63780	.097	-4.1848	.2315
	F3	-3.63333*	.63780	.001	-5.8415	-1.4252
	F4	-1.96000	.63780	.102	-4.1682	.2482
	F5	-2.65667*	.63780	.013	-4.8648	-.4485
	F6	-.66000	.63780	.962	-2.8682	1.5482
	F7	-3.96000*	.63780	.000	-6.1682	-1.7518
	F8	1.34333	.63780	.451	-.8648	3.5515
F3	F1	1.65667	.63780	.226	-.5515	3.8648
	F2	3.63333*	.63780	.001	1.4252	5.8415
	F4	1.67333	.63780	.217	-.5348	3.8815
	F5	.97667	.63780	.781	-1.2315	3.1848
	F6	2.97333*	.63780	.005	.7652	5.1815
	F7	-.32667	.63780	.999	-2.5348	1.8815
	F8	4.97667*	.63780	.000	2.7685	7.1848
F4	F1	-.01667	.63780	1.000	-2.2248	2.1915
	F2	1.96000	.63780	.102	-.2482	4.1682
	F3	-1.67333	.63780	.217	-3.8815	.5348
	F5	-.69667	.63780	.949	-2.9048	1.5115
	F6	1.30000	.63780	.489	-.9082	3.5082
	F7	-2.00000	.63780	.091	-4.2082	.2082
	F8	3.30333*	.63780	.002	1.0952	5.5115
F5	F1	.68000	.63780	.955	-1.5282	2.8882
	F2	2.65667*	.63780	.013	.4485	4.8648
	F3	-.97667	.63780	.781	-3.1848	1.2315

	F4	.69667	.63780	.949	-1.5115	2.9048
	F6	1.99667	.63780	.092	-.2115	4.2048
	F7	-1.30333	.63780	.486	-3.5115	.9048
	F8	4.00000*	.63780	.000	1.7918	6.2082
F6	F1	-1.31667	.63780	.474	-3.5248	.8915
	F2	.66000	.63780	.962	-1.5482	2.8682
	F3	-2.97333*	.63780	.005	-5.1815	-.7652
	F4	-1.30000	.63780	.489	-3.5082	.9082
	F5	-1.99667	.63780	.092	-4.2048	.2115
	F7	-3.30000*	.63780	.002	-5.5082	-1.0918
	F8	2.00333	.63780	.090	-.2048	4.2115
F7	F1	1.98333	.63780	.095	-.2248	4.1915
	F2	3.96000*	.63780	.000	1.7518	6.1682
	F3	.32667	.63780	.999	-1.8815	2.5348
	F4	2.00000	.63780	.091	-.2082	4.2082
	F5	1.30333	.63780	.486	-.9048	3.5115
	F6	3.30000*	.63780	.002	1.0918	5.5082
	F8	5.30333*	.63780	.000	3.0952	7.5115
F8	F1	-3.32000*	.63780	.002	-5.5282	-1.1118
	F2	-1.34333	.63780	.451	-3.5515	.8648
	F3	-4.97667*	.63780	.000	-7.1848	-2.7685
	F4	-3.30333*	.63780	.002	-5.5115	-1.0952
	F5	-4.00000*	.63780	.000	-6.2082	-1.7918
	F6	-2.00333	.63780	.090	-4.2115	.2048
	F7	-5.30333*	.63780	.000	-7.5115	-3.0952

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

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai $\text{sig} < \alpha$ (0,05) sehingga H_0 ditolak (*), berarti rata-rata *Carr's index* granul ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu formula 1 menunjukkan perbedaan yang signifikan terhadap formula 8; formula 2 menunjukkan perbedaan yang signifikan terhadap formula 3, formula 5, dan formula 7; formula 3 menunjukkan perbedaan yang signifikan terhadap formula 2, formula 6, dan formula 8; formula 4 menunjukkan perbedaan yang signifikan terhadap formula 8; formula 5 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 8; formula 6 menunjukkan perbedaan yang signifikan terhadap formula 3 dan formula 7; formula 7 menunjukkan perbedaan yang signifikan terhadap formula 2, formula 6, dan formula 8.

LAMPIRAN AD

HASIL UJI STATISTIK *HAUSNER RATIO* GRANUL KO-PROSES

ANTAR FORMULA

(*One Way Anova*)

Descriptives

Hausner_ratio

					95% Confidence Interval for Mean			
					Lower Bound	Upper Bound		
	N	Mean	Std. Deviation	Std. Error			Minimum	Maximum
F1	3	1.2867	.00577	.00333	1.2723	1.3010	1.28	1.29
F2	3	1.2633	.01528	.00882	1.2254	1.3013	1.25	1.28
F3	3	1.3167	.01155	.00667	1.2880	1.3454	1.31	1.33
F4	3	1.2867	.00577	.00333	1.2723	1.3010	1.28	1.29
F5	3	1.3000	.01732	.01000	1.2570	1.3430	1.28	1.31
F6	3	1.2667	.01155	.00667	1.2380	1.2954	1.26	1.28
F7	3	1.3233	.01155	.00667	1.2946	1.3520	1.31	1.33
F8	3	1.2333	.02082	.01202	1.1816	1.2850	1.21	1.25
Total	24	1.2846	.03050	.00623	1.2717	1.2975	1.21	1.33

Test of Homogeneity of Variances

Hausner_ratio

Levene Statistic	df1	df2	Sig.
1.787	7	16	.159

ANOVA					
Hausner_ratio					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.019	7	.003	14.774	.000
Within Groups	.003	16	.000		
Total	.021	23			

Keterangan :

$F_{hitung} (14,774) > F_{tabel (0,05) (7,16) (2,66)}$, maka H_0 ditolak dan ada perbedaan bermakna antar formula. Rata-rata *Hausner ratio* granul ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula.

Multiple Comparisons

Hausner_ratio

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	.02333	.01093	.435	-.0145	.0612
	F3	-.03000	.01093	.178	-.0678	.0078
	F4	.00000	.01093	1.000	-.0378	.0378
	F5	-.01333	.01093	.914	-.0512	.0245
	F6	.02000	.01093	.611	-.0178	.0578
	F7	-.03667	.01093	.061	-.0745	.0012
	F8	.05333*	.01093	.003	.0155	.0912
F2	F1	-.02333	.01093	.435	-.0612	.0145
	F3	-.05333*	.01093	.003	-.0912	-.0155
	F4	-.02333	.01093	.435	-.0612	.0145
	F5	-.03667	.01093	.061	-.0745	.0012
	F6	-.00333	.01093	1.000	-.0412	.0345
	F7	-.06000*	.01093	.001	-.0978	-.0222
	F8	.03000	.01093	.178	-.0078	.0678
F3	F1	.03000	.01093	.178	-.0078	.0678
	F2	.05333*	.01093	.003	.0155	.0912
	F4	.03000	.01093	.178	-.0078	.0678
	F5	.01667	.01093	.784	-.0212	.0545
	F6	.05000*	.01093	.006	.0122	.0878
	F7	-.00667	.01093	.998	-.0445	.0312
	F8	.08333*	.01093	.000	.0455	.1212
F4	F1	.00000	.01093	1.000	-.0378	.0378
	F2	.02333	.01093	.435	-.0145	.0612
	F3	-.03000	.01093	.178	-.0678	.0078
	F5	-.01333	.01093	.914	-.0512	.0245
	F6	.02000	.01093	.611	-.0178	.0578
	F7	-.03667	.01093	.061	-.0745	.0012
	F8	.05333*	.01093	.003	.0155	.0912
F5	F1	.01333	.01093	.914	-.0245	.0512
	F2	.03667	.01093	.061	-.0012	.0745
	F3	-.01667	.01093	.784	-.0545	.0212

	F4	.01333	.01093	.914	-.0245	.0512
	F6	.03333	.01093	.106	-.0045	.0712
	F7	-.02333	.01093	.435	-.0612	.0145
	F8	.06667*	.01093	.000	.0288	.1045
F6	F1	-.02000	.01093	.611	-.0578	.0178
	F2	.00333	.01093	1.000	-.0345	.0412
	F3	-.05000*	.01093	.006	-.0878	-.0122
	F4	-.02000	.01093	.611	-.0578	.0178
	F5	-.03333	.01093	.106	-.0712	.0045
	F7	-.05667*	.01093	.002	-.0945	-.0188
	F8	.03333	.01093	.106	-.0045	.0712
F7	F1	.03667	.01093	.061	-.0012	.0745
	F2	.06000*	.01093	.001	.0222	.0978
	F3	.00667	.01093	.998	-.0312	.0445
	F4	.03667	.01093	.061	-.0012	.0745
	F5	.02333	.01093	.435	-.0145	.0612
	F6	.05667*	.01093	.002	.0188	.0945
	F8	.09000*	.01093	.000	.0522	.1278
F8	F1	-.05333*	.01093	.003	-.0912	-.0155
	F2	-.03000	.01093	.178	-.0678	.0078
	F3	-.08333*	.01093	.000	-.1212	-.0455
	F4	-.05333*	.01093	.003	-.0912	-.0155
	F5	-.06667*	.01093	.000	-.1045	-.0288
	F6	-.03333	.01093	.106	-.0712	.0045
	F7	-.09000*	.01093	.000	-.1278	-.0522

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

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai $\text{sig} < \alpha$ (0,05) sehingga H_0 ditolak (*), berarti rata-rata *Hausner ratio* granul ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu formula formula 1 menunjukkan perbedaan yang signifikan terhadap formula 8; formula 2 menunjukkan perbedaan yang signifikan terhadap formula 3 dan formula 7; formula 3 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 8; formula 4 menunjukkan perbedaan yang signifikan terhadap formula 8; formula 5 menunjukkan perbedaan yang signifikan terhadap formula 8; formula 6 menunjukkan perbedaan yang signifikan terhadap formula 3 dan formula 7; formula 7 menunjukkan perbedaan yang signifikan terhadap formula 8.

LAMPIRAN AE

HASIL UJI STATISTIK KEKERASAN TABLET KO-PROSES

ANTAR FORMULA

(One Way Anova)

Descriptives

Kekerasan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	3,4000	0,31607	0,18248	2,6148	4,1852	3,07	3,70
F2	3	2,4567	0,12662	0,07311	2,1421	2,7712	2,32	2,57
F3	3	2,5433	0,18148	0,10477	2,0925	2,9941	2,35	2,71
F4	3	3,0267	0,35346	0,20407	2,1486	3,9047	2,62	3,26
F5	3	1,7233	0,11930	0,06888	1,4270	2,0197	1,64	1,86
F6	3	2,7633	0,55582	0,32090	1,3826	4,1441	2,13	3,17
F7	3	2,2433	0,17898	0,10333	1,7987	2,6879	2,09	2,44
F8	3	2,6200	0,11136	0,06429	2,3434	2,8966	2,52	2,74
Total	24	2,5971	0,53522	0,10925	2,3711	2,8231	1,64	3,70

Test of Homogeneity of Variances

Kekerasan

Levene Statistic	df1	df2	Sig.
3,216	7	16	0,025

ANOVA

Kekerasan

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5,306	7	0,758	9,454	0,000
Within Groups	1,283	16	0,080		
Total	6,588	23			

Keterangan :

$F_{hitung} (9,454) > F_{tabel (0,05) (7,16)} (2,66)$, maka H_0 ditolak dan ada perbedaan bermakna antar formula. Rata-rata kekerasan tablet ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula.

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	0,94333*	0,23119	0,015	0,1429	1,7438
	F3	0,85667*	0,23119	0,032	0,0562	1,6571
	F4	0,37333	0,23119	0,736	-0,4271	1,1738
	F5	1,67667*	0,23119	0,000	0,8762	2,4771
	F6	0,63667	0,23119	0,176	-0,1638	1,4371
	F7	1,15667*	0,23119	0,003	0,3562	1,9571
	F8	0,78000	0,23119	0,059	-0,0204	1,5804
F2	F1	-0,94333*	0,23119	0,015	-1,7438	-0,1429
	F3	-0,08667	0,23119	1,000	-0,8871	0,7138
	F4	-0,57000	0,23119	0,276	-1,3704	0,2304
	F5	0,73333	0,23119	0,085	-0,0671	1,5338
	F6	-0,30667	0,23119	0,876	-1,1071	0,4938
	F7	0,21333	0,23119	0,979	-0,5871	1,0138
	F8	-0,16333	0,23119	0,996	-0,9638	0,6371
F3	F1	-0,85667*	0,23119	0,032	-1,6571	-0,0562
	F2	0,08667	0,23119	1,000	-0,7138	0,8871
	F4	-0,48333	0,23119	0,459	-1,2838	0,3171
	F5	0,82000*	0,23119	0,043	0,0196	1,6204
	F6	-0,22000	0,23119	0,975	-1,0204	0,5804
	F7	0,30000	0,23119	0,887	-0,5004	1,1004
	F8	-0,07667	0,23119	1,000	-0,8771	0,7238
F4	F1	-0,37333	0,23119	0,736	-1,1738	0,4271
	F2	0,57000	0,23119	0,276	-0,2304	1,3704
	F3	0,48333	0,23119	0,459	-0,3171	1,2838
	F5	1,30333*	0,23119	0,001	0,5029	2,1038
	F6	0,26333	0,23119	0,938	-0,5371	1,0638
	F7	0,78333	0,23119	0,057	-0,0171	1,5838
	F8	0,40667	0,23119	0,653	-0,3938	1,2071
F5	F1	-1,67667*	0,23119	0,000	-2,4771	-0,8762
	F2	-0,73333	0,23119	0,085	-1,5338	0,0671
	F3	-0,82000*	0,23119	0,043	-1,6204	-0,0196

	F4	-1,30333*	0,23119	0,001	-2,1038	-0,5029
	F6	-1,04000*	0,23119	0,007	-1,8404	-0,2396
	F7	-0,52000	0,23119	0,375	-1,3204	0,2804
	F8	-0,89667*	0,23119	0,023	-1,6971	-0,0962
F6	F1	-0,63667	0,23119	0,176	-1,4371	0,1638
	F2	0,30667	0,23119	0,876	-0,4938	1,1071
	F3	0,22000	0,23119	0,975	-0,5804	1,0204
	F4	-0,26333	0,23119	0,938	-1,0638	0,5371
	F5	1,04000*	0,23119	0,007	0,2396	1,8404
	F7	0,52000	0,23119	0,375	-0,2804	1,3204
	F8	0,14333	0,23119	0,998	-0,6571	0,9438
F7	F1	-1,15667*	0,23119	0,003	-1,9571	-0,3562
	F2	-0,21333	0,23119	0,979	-1,0138	0,5871
	F3	-0,30000	0,23119	0,887	-1,1004	0,5004
	F4	-0,78333	0,23119	0,057	-1,5838	0,0171
	F5	0,52000	0,23119	0,375	-0,2804	1,3204
	F6	-0,52000	0,23119	0,375	-1,3204	0,2804
	F8	-0,37667	0,23119	0,728	-1,1771	0,4238
F8	F1	-0,78000	0,23119	0,059	-1,5804	0,0204
	F2	0,16333	0,23119	0,996	-0,6371	0,9638
	F3	0,07667	0,23119	1,000	-0,7238	0,8771
	F4	-0,40667	0,23119	0,653	-1,2071	0,3938
	F5	0,89667*	0,23119	0,023	0,0962	1,6971
	F6	-0,14333	0,23119	0,998	-0,9438	0,6571
	F7	0,37667	0,23119	0,728	-0,4238	1,1771

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

Keterangan :

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai $\text{sig} < \alpha$ (0,05) sehingga H_0 ditolak (*), berarti rata-rata kekerasan tablet ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu formula 1 menunjukkan perbedaan yang signifikan terhadap formula 2, formula 3, formula 5, dan formula 7; formula 2 menunjukkan perbedaan yang signifikan terhadap formula 1; formula 3 menunjukkan perbedaan yang signifikan terhadap formula 1 dan formula 5; formula 4 menunjukkan perbedaan yang signifikan terhadap formula 5; formula 5 menunjukkan perbedaan yang signifikan terhadap formula 1, formula 3, formula 4, formula 6, dan formula 8; formula 6 menunjukkan perbedaan yang signifikan terhadap formula 5.

LAMPIRAN AF

HASIL UJI STATISTIK KERAPUHAN TABLET KO-PROSES

ANTAR FORMULA

(One Way Anova)

Descriptives

Kerapuhan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	0,3633	0,27647	0,15962	-0,3234	1,0501	0,17	0,68
F2	3	0,3667	0,03215	0,01856	0,2868	0,4465	0,33	0,39
F3	3	0,4133	0,11590	0,06692	0,1254	0,7013	0,28	0,49
F4	3	0,3400	0,10149	0,05859	0,0879	0,5921	0,23	0,43
F5	3	0,5133	0,08737	0,05044	0,2963	0,7304	0,44	0,61
F6	3	0,1433	0,06506	0,03756	-0,0183	0,3050	0,08	0,21
F7	3	0,2667	0,12503	0,07219	-0,0439	0,5773	0,18	0,41
F8	3	0,3367	0,15144	0,08743	-0,0395	0,7129	0,23	0,51
Total	24	0,3429	0,15398	0,03143	0,2779	0,4079	0,08	0,68

Test of Homogeneity of Variances

Kerapuhan

Levene Statistic	df1	df2	Sig.
3,691	7	16	0,014

ANOVA

Kerapuhan

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0,242	7	0,035	1,824	0,151
Within Groups	0,303	16	0,019		
Total	0,545	23			

Keterangan :

$F_{hitung} (1,824) < F_{tabel (0,05) (7,16)} (2,66)$, maka H_0 diterima dan tidak ada perbedaan yang bermakna antar formula. Rata-rata kerapuhan tablet ko-proses dari kedelapan formula menunjukkan tidak ada perbedaan yang signifikan antar formula.

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	-0,00333	0,11241	1,000	-0,3925	0,3858
	F3	-0,05000	0,11241	1,000	-0,4392	0,3392
	F4	0,02333	0,11241	1,000	-0,3658	0,4125
	F5	-0,15000	0,11241	0,873	-0,5392	0,2392
	F6	0,22000	0,11241	0,536	-0,1692	0,6092
	F7	0,09667	0,11241	0,986	-0,2925	0,4858
	F8	0,02667	0,11241	1,000	-0,3625	0,4158
F2	F1	0,00333	0,11241	1,000	-0,3858	0,3925
	F3	-0,04667	0,11241	1,000	-0,4358	0,3425
	F4	0,02667	0,11241	1,000	-0,3625	0,4158
	F5	-0,14667	0,11241	0,884	-0,5358	0,2425
	F6	0,22333	0,11241	0,518	-0,1658	0,6125
	F7	0,10000	0,11241	0,983	-0,2892	0,4892
	F8	0,03000	0,11241	1,000	-0,3592	0,4192
F3	F1	0,05000	0,11241	1,000	-0,3392	0,4392
	F2	0,04667	0,11241	1,000	-0,3425	0,4358
	F4	0,07333	0,11241	0,997	-0,3158	0,4625
	F5	-0,10000	0,11241	0,983	-0,4892	0,2892
	F6	0,27000	0,11241	0,303	-0,1192	0,6592
	F7	0,14667	0,11241	0,884	-0,2425	0,5358
	F8	0,07667	0,11241	0,996	-0,3125	0,4658
F4	F1	-0,02333	0,11241	1,000	-0,4125	0,3658
	F2	-0,02667	0,11241	1,000	-0,4158	0,3625
	F3	-0,07333	0,11241	0,997	-0,4625	0,3158
	F5	-0,17333	0,11241	0,775	-0,5625	0,2158
	F6	0,19667	0,11241	0,659	-0,1925	0,5858
	F7	0,07333	0,11241	0,997	-0,3158	0,4625
	F8	0,00333	0,11241	1,000	-0,3858	0,3925
F5	F1	0,15000	0,11241	0,873	-0,2392	0,5392
	F2	0,14667	0,11241	0,884	-0,2425	0,5358
	F3	0,10000	0,11241	0,983	-0,2892	0,4892

	F4	0,17333	0,11241	0,775	-0,2158	0,5625
	F6	0,37000	0,11241	0,069	-0,0192	0,7592
	F7	0,24667	0,11241	0,403	-0,1425	0,6358
	F8	0,17667	0,11241	0,760	-0,2125	0,5658
F6	F1	-0,22000	0,11241	0,536	-0,6092	0,1692
	F2	-0,22333	0,11241	0,518	-0,6125	0,1658
	F3	-0,27000	0,11241	0,303	-0,6592	0,1192
	F4	-0,19667	0,11241	0,659	-0,5858	0,1925
	F5	-0,37000	0,11241	0,069	-0,7592	0,0192
	F7	-0,12333	0,11241	0,948	-0,5125	0,2658
	F8	-0,19333	0,11241	0,676	-0,5825	0,1958
F7	F1	-0,09667	0,11241	0,986	-0,4858	0,2925
	F2	-0,10000	0,11241	0,983	-0,4892	0,2892
	F3	-0,14667	0,11241	0,884	-0,5358	0,2425
	F4	-0,07333	0,11241	0,997	-0,4625	0,3158
	F5	-0,24667	0,11241	0,403	-0,6358	0,1425
	F6	0,12333	0,11241	0,948	-0,2658	0,5125
	F8	-0,07000	0,11241	0,998	-0,4592	0,3192
F8	F1	-0,02667	0,11241	1,000	-0,4158	0,3625
	F2	-0,03000	0,11241	1,000	-0,4192	0,3592
	F3	-0,07667	0,11241	0,996	-0,4658	0,3125
	F4	-0,00333	0,11241	1,000	-0,3925	0,3858
	F5	-0,17667	0,11241	0,760	-0,5658	0,2125
	F6	0,19333	0,11241	0,676	-0,1958	0,5825
	F7	0,07000	0,11241	0,998	-0,3192	0,4592

Keterangan :

Hasil uji HSD Tukey dari kedelapan formula, diperoleh nilai $\text{sig} > \alpha$ (0,05) sehingga H_0 diterima, berarti rata-rata kerapuhan tablet ko-proses dari kedelapan formula menunjukkan bahwa tidak ada perbedaan yang signifikan antar formula.

LAMPIRAN AG

HASIL Uji STATISTIK WAKTU HANCUR TABLET KO-PROSES

ANTAR FORMULA

(One Way Anova)

Descriptives

Waktu Hancur

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	3,8667	1,10151	0,63596	1,1304	6,6030	2,60	4,60
F2	3	12,8000	1,96977	1,13725	7,9068	17,6932	11,20	15,00
F3	3	2,5333	0,23094	0,13333	1,9596	3,1070	2,40	2,80
F4	3	5,4667	1,94251	1,12151	0,6412	10,2921	3,80	7,60
F5	3	3,6000	1,05830	0,61101	0,9710	6,2290	2,80	4,80
F6	3	7,9333	0,11547	0,06667	7,6465	8,2202	7,80	8,00
F7	3	2,0000	0,00000	0,00000	2,0000	2,0000	2,00	2,00
F8	3	5,0000	0,40000	0,23094	4,0063	5,9937	4,60	5,40
Total	24	5,4000	3,49260	0,71292	3,9252	6,8748	2,00	15,00

Test of Homogeneity of Variances

Waktu Hancur

Levene Statistic	df1	df2	Sig.
4,739	7	16	0,005

ANOVA

Waktu Hancur

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	260,133	7	37,162	29,109	0,000
Within Groups	20,427	16	1,277		
Total	280,560	23			

Keterangan :

$F_{hitung} (29,109) > F_{tabel (0,05) (7,16)} (2,66)$ maka H_0 ditolak dan ada perbedaan yang bermakna antar formula. Rata-rata waktu hancur tablet ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula.

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	-8,93333*	0,92256	0,000	-12,1274	-5,7393
	F3	1,33333	0,92256	0,824	-1,8607	4,5274
	F4	-1,60000	0,92256	0,668	-4,7940	1,5940
	F5	0,26667	0,92256	1,000	-2,9274	3,4607
	F6	-4,06667*	0,92256	0,008	-7,2607	-0,8726
	F7	1,86667	0,92256	0,497	-1,3274	5,0607
	F8	-1,13333	0,92256	0,911	-4,3274	2,0607
F2	F1	8,93333*	0,92256	0,000	5,7393	12,1274
	F3	10,26667*	0,92256	0,000	7,0726	13,4607
	F4	7,33333*	0,92256	0,000	4,1393	10,5274
	F5	9,20000*	0,92256	0,000	6,0060	12,3940
	F6	4,86667*	0,92256	0,002	1,6726	8,0607
	F7	10,80000*	0,92256	0,000	7,6060	13,9940
	F8	7,80000*	0,92256	0,000	4,6060	10,9940
F3	F1	-1,33333	0,92256	0,824	-4,5274	1,8607
	F2	-10,26667*	0,92256	0,000	-13,4607	-7,0726
	F4	-2,93333	0,92256	0,084	-6,1274	0,2607
	F5	-1,06667	0,92256	0,933	-4,2607	2,1274
	F6	-5,40000*	0,92256	0,001	-8,5940	-2,2060
	F7	0,53333	0,92256	0,999	-2,6607	3,7274
	F8	-2,46667	0,92256	0,200	-5,6607	0,7274
F4	F1	1,60000	0,92256	0,668	-1,5940	4,7940
	F2	-7,33333*	0,92256	0,000	-10,5274	-4,1393
	F3	2,93333	0,92256	0,084	-0,2607	6,1274
	F5	1,86667	0,92256	0,497	-1,3274	5,0607
	F6	-2,46667	0,92256	0,200	-5,6607	0,7274
	F7	3,46667*	0,92256	0,029	0,2726	6,6607
	F8	0,46667	0,92256	0,999	-2,7274	3,6607
F5	F1	-0,26667	0,92256	1,000	-3,4607	2,9274
	F2	-9,20000*	0,92256	0,000	-12,3940	-6,0060
	F3	1,06667	0,92256	0,933	-2,1274	4,2607

	F4	-1,86667	0,92256	0,497	-5,0607	1,3274
	F6	-4,33333*	0,92256	0,005	-7,5274	-1,1393
	F7	1,60000	0,92256	0,668	-1,5940	4,7940
	F8	-1,40000	0,92256	0,788	-4,5940	1,7940
F6	F1	4,06667*	0,92256	0,008	0,8726	7,2607
	F2	-4,86667*	0,92256	0,002	-8,0607	-1,6726
	F3	5,40000*	0,92256	0,001	2,2060	8,5940
	F4	2,46667	0,92256	0,200	-0,7274	5,6607
	F5	4,33333*	0,92256	0,005	1,1393	7,5274
	F7	5,93333*	0,92256	0,000	2,7393	9,1274
	F8	2,93333	0,92256	0,084	-0,2607	6,1274
F7	F1	-1,86667	0,92256	0,497	-5,0607	1,3274
	F2	-10,80000*	0,92256	0,000	-13,9940	-7,6060
	F3	-0,53333	0,92256	0,999	-3,7274	2,6607
	F4	-3,46667*	0,92256	0,029	-6,6607	-0,2726
	F5	-1,60000	0,92256	0,668	-4,7940	1,5940
	F6	-5,93333*	0,92256	0,000	-9,1274	-2,7393
	F8	-3,00000	0,92256	0,074	-6,1940	0,1940
F8	F1	1,13333	0,92256	0,911	-2,0607	4,3274
	F2	-7,80000*	0,92256	0,000	-10,9940	-4,6060
	F3	2,46667	0,92256	0,200	-0,7274	5,6607
	F4	-0,46667	0,92256	0,999	-3,6607	2,7274
	F5	1,40000	0,92256	0,788	-1,7940	4,5940
	F6	-2,93333	0,92256	0,084	-6,1274	0,2607
	F7	3,00000	0,92256	0,074	-0,1940	6,1940

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

Keterangan :

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai Sig.< α (0,05) sehingga Ho ditolak (*), berarti rata-rata waktu hancur tablet ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu formula 1 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 6; formula 2 menunjukkan perbedaan yang signifikan terhadap formula 1, formula 3, formula 4, formula 5, formula 6, formula 7, dan formula 8; formula 3 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 6; formula 4 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 7; formula 5 menunjukkan perbedaan yang signifikan terhadap formula 2 dan formula 6; formula 6 menunjukkan perbedaan yang signifikan terhadap formula 7.

LAMPIRAN AH

HASIL UJI STATISTIK WAKTU PEMBASAHAN TABLET

KO-PROSES ANTAR FORMULA

(One Way Anova)

Descriptives

Waktu Pembasahan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	10,7333	2,77369	1,60139	3,8431	17,6236	8,40	13,80
F2	3	84,1333	30,17173	17,41966	9,1826	159,0841	63,80	118,80
F3	3	6,2000	0,52915	0,30551	4,8855	7,5145	5,60	6,60
F4	3	15,0000	7,66290	4,42418	-4,0357	34,0357	9,80	23,80
F5	3	38,0667	1,66533	0,96148	33,9298	42,2036	36,20	39,40
F6	3	36,6667	9,72899	5,61704	12,4985	60,8348	29,80	47,80
F7	3	6,5333	0,75719	0,43716	4,6524	8,4143	6,00	7,40
F8	3	28,9333	12,79114	7,38497	-2,8416	60,7083	14,20	37,20
Total	24	28,2833	26,92159	5,49535	16,9153	39,6513	5,60	118,80

Test of Homogeneity of Variances

Waktu Pembasahan

Levene Statistic	df1	df2	Sig.
9,372	7	16	0,000

ANOVA

Waktu Pembasahan

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	14192,473	7	2027,496	13,095	0,000
Within Groups	2477,280	16	154,830		
Total	16669,753	23			

Keterangan :

$F_{hitung} (13,095) > F_{tabel (0,05) (7,16)} (2,66)$ maka H_0 ditolak dan ada perbedaan yang bermakna antar formula. Rata-rata waktu pembasahan tablet ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula.

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	-73,40000*	10,15972	0,000	-108,5745	-38,2255
	F3	4,53333	10,15972	1,000	-30,6412	39,7078
	F4	-4,26667	10,15972	1,000	-39,4412	30,9078
	F5	-27,33333	10,15972	0,195	-62,5078	7,8412
	F6	-25,93333	10,15972	0,242	-61,1078	9,2412
	F7	4,20000	10,15972	1,000	-30,9745	39,3745
	F8	-18,20000	10,15972	0,634	-53,3745	16,9745
F2	F1	73,40000*	10,15972	0,000	38,2255	108,5745
	F3	77,93333*	10,15972	0,000	42,7588	113,1078
	F4	69,13333*	10,15972	0,000	33,9588	104,3078
	F5	46,06667*	10,15972	0,006	10,8922	81,2412
	F6	47,46667*	10,15972	0,005	12,2922	82,6412
	F7	77,60000*	10,15972	0,000	42,4255	112,7745
	F8	55,20000*	10,15972	0,001	20,0255	90,3745
F3	F1	-4,53333	10,15972	1,000	-39,7078	30,6412
	F2	-77,93333*	10,15972	0,000	-113,1078	-42,7588
	F4	-8,80000	10,15972	0,985	-43,9745	26,3745
	F5	-31,86667	10,15972	0,091	-67,0412	3,3078
	F6	-30,46667	10,15972	0,116	-65,6412	4,7078
	F7	-0,33333	10,15972	1,000	-35,5078	34,8412
	F8	-22,73333	10,15972	,381	-57,9078	12,4412
F4	F1	4,26667	10,15972	1,000	-30,9078	39,4412
	F2	-69,13333*	10,15972	0,000	-104,3078	-33,9588
	F3	8,80000	10,15972	0,985	-26,3745	43,9745
	F5	-23,06667	10,15972	0,365	-58,2412	12,1078
	F6	-21,66667	10,15972	0,436	-56,8412	13,5078
	F7	8,46667	10,15972	0,988	-26,7078	43,6412
	F8	-13,93333	10,15972	0,857	-49,1078	21,2412
F5	F1	27,33333	10,15972	0,195	-7,8412	62,5078

	F2	-46,06667*	10,15972	0,006	-81,2412	-10,8922
	F3	31,86667	10,15972	0,091	-3,3078	67,0412
	F4	23,06667	10,15972	0,365	-12,1078	58,2412
	F6	1,40000	10,15972	1,000	-33,7745	36,5745
	F7	31,53333	10,15972	0,096	-3,6412	66,7078
	F8	9,13333	10,15972	0,982	-26,0412	44,3078
F6	F1	25,93333	10,15972	0,242	-9,2412	61,1078
	F2	-47,46667*	10,15972	0,005	-82,6412	-12,2922
	F3	30,46667	10,15972	0,116	-4,7078	65,6412
	F4	21,66667	10,15972	0,436	-13,5078	56,8412
	F5	-1,40000	10,15972	1,000	-36,5745	33,7745
	F7	30,13333	10,15972	0,123	-5,0412	65,3078
	F8	7,73333	10,15972	0,993	-27,4412	42,9078
F7	F1	-4,20000	10,15972	1,000	-39,3745	30,9745
	F2	-77,60000*	10,15972	0,000	-112,7745	-42,4255
	F3	0,33333	10,15972	1,000	-34,8412	35,5078
	F4	-8,46667	10,15972	0,988	-43,6412	26,7078
	F5	-31,53333	10,15972	0,096	-66,7078	3,6412
	F6	-30,13333	10,15972	0,123	-65,3078	5,0412
	F8	-22,40000	10,15972	0,398	-57,5745	12,7745
F8	F1	18,20000	10,15972	0,634	-16,9745	53,3745
	F2	-55,20000*	10,15972	0,001	-90,3745	-20,0255
	F3	22,73333	10,15972	0,381	-12,4412	57,9078
	F4	13,93333	10,15972	0,857	-21,2412	49,1078
	F5	-9,13333	10,15972	0,982	-44,3078	26,0412
	F6	-7,73333	10,15972	0,993	-42,9078	27,4412
	F7	22,40000	10,15972	0,398	-12,7745	57,5745

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

Keterangan :

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai Sig.< α (0,05) sehingga Ho ditolak (*), berarti rata-rata waktu pembasahan tablet ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu semua formula menunjukkan perbedaan yang signifikan terhadap formula 2.

LAMPIRAN AI

HASIL UJI STATISTIK RASIO ABSORPSI AIR TABLET

KO-PROSES ANTAR FORMULA

(One Way Anova)

Descriptives

Rasio Absorpsi Air

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	172,5900	8,12578	4,69142	152,4044	192,7756	167,70	181,97
F2	3	151,2000	7,08293	4,08933	133,6050	168,7950	144,75	158,78
F3	3	178,0267	4,66301	2,69219	166,4431	189,6102	173,27	182,59
F4	3	148,8800	16,99526	9,81222	106,6614	191,0986	134,42	167,60
F5	3	159,2567	10,40209	6,00565	133,4164	185,0969	150,88	170,90
F6	3	125,2733	16,26417	9,39012	84,8709	165,6758	108,24	140,64
F7	3	159,6100	2,62395	1,51494	153,0918	166,1282	156,87	162,10
F8	3	152,5033	17,78275	10,26687	108,3285	196,6781	132,39	166,14
Total	24	155,9175	18,28216	3,73183	148,1976	163,6374	108,24	182,59

Test of Homogeneity of Variances

Rasio Absorpsi Air

Levene Statistic	df1	df2	Sig.
2,086	7	16	0,106

ANOVA

Rasio Absorpsi Air

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5442,224	7	777,461	5,540	0,002
Within Groups	2245,233	16	140,327		
Total	7687,457	23			

Keterangan :

$F_{hitung} (5,540) > F_{tabel (0,05) (7,16)} (2,66)$ maka H_0 ditolak dan ada perbedaan yang bermakna antar formula. Rata-rata rasio absorpsi air tablet ko-proses dari kedelapan formula menunjukkan ada perbedaan yang signifikan antar formula.

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	21,39000	9,67220	0,394	-12,0966	54,8766
	F3	-5,43667	9,67220	0,999	-38,9233	28,0499
	F4	23,71000	9,67220	0,282	-9,7766	57,1966
	F5	13,33333	9,67220	0,854	-20,1533	46,8199
	F6	47,31667*	9,67220	0,003	13,8301	80,8033
	F7	12,98000	9,67220	0,870	-20,5066	46,4666
	F8	20,08667	9,67220	0,467	-13,3999	53,5733
F2	F1	-21,39000	9,67220	0,394	-54,8766	12,0966
	F3	-26,82667	9,67220	0,170	-60,3133	6,6599
	F4	2,32000	9,67220	1,000	-31,1666	35,8066
	F5	-8,05667	9,67220	0,988	-41,5433	25,4299
	F6	25,92667	9,67220	0,198	-7,5599	59,4133
	F7	-8,41000	9,67220	0,985	-41,8966	25,0766
	F8	-1,30333	9,67220	1,000	-34,7899	32,1833
F3	F1	5,43667	9,67220	0,999	-28,0499	38,9233
	F2	26,82667	9,67220	0,170	-6,6599	60,3133
	F4	29,14667	9,67220	0,113	-4,3399	62,6333
	F5	18,77000	9,67220	0,545	-14,7166	52,2566
	F6	52,75333*	9,67220	0,001	19,2667	86,2399
	F7	18,41667	9,67220	0,567	-15,0699	51,9033
	F8	25,52333	9,67220	0,212	-7,9633	59,0099
F4	F1	-23,71000	9,67220	0,282	-57,1966	9,7766
	F2	-2,32000	9,67220	1,000	-35,8066	31,1666
	F3	-29,14667	9,67220	0,113	-62,6333	4,3399
	F5	-10,37667	9,67220	0,954	-43,8633	23,1099
	F6	23,60667	9,67220	0,287	-9,8799	57,0933
	F7	-10,73000	9,67220	0,945	-44,2166	22,7566
	F8	-3,62333	9,67220	1,000	-37,1099	29,8633
F5	F1	-13,33333	9,67220	0,854	-46,8199	20,1533
	F2	8,05667	9,67220	0,988	-25,4299	41,5433
	F3	-18,77000	9,67220	0,545	-52,2566	14,7166

	F4	10,37667	9,67220	0,954	-23,1099	43,8633
	F6	33,98333*	9,67220	0,045	0,4967	67,4699
	F7	-0,35333	9,67220	1,000	-33,8399	33,1333
	F8	6,75333	9,67220	0,996	-26,7333	40,2399
F6	F1	-47,31667*	9,67220	0,003	-80,8033	-13,8301
	F2	-25,92667	9,67220	0,198	-59,4133	7,5599
	F3	-52,75333*	9,67220	0,001	-86,2399	-19,2667
	F4	-23,60667	9,67220	0,287	-57,0933	9,8799
	F5	-33,98333*	9,67220	0,045	-67,4699	-0,4967
	F7	-34,33667*	9,67220	0,042	-67,8233	-0,8501
	F8	-27,23000	9,67220	0,159	-60,7166	6,2566
F7	F1	-12,98000	9,67220	0,870	-46,4666	20,5066
	F2	8,41000	9,67220	0,985	-25,0766	41,8966
	F3	-18,41667	9,67220	0,567	-51,9033	15,0699
	F4	10,73000	9,67220	0,945	-22,7566	44,2166
	F5	0,35333	9,67220	1,000	-33,1333	33,8399
	F6	34,33667*	9,67220	0,042	,8501	67,8233
	F8	7,10667	9,67220	0,994	-26,3799	40,5933
F8	F1	-20,08667	9,67220	0,467	-53,5733	13,3999
	F2	1,30333	9,67220	1,000	-32,1833	34,7899
	F3	-25,52333	9,67220	0,212	-59,0099	7,9633
	F4	3,62333	9,67220	1,000	-29,8633	37,1099
	F5	-6,75333	9,67220	0,996	-40,2399	26,7333
	F6	27,23000	9,67220	0,159	-6,2566	60,7166
	F7	-7,10667	9,67220	0,994	-40,5933	26,3799

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

Keterangan :

Hasil Uji HSD Tukey dari kedelapan formula , diperoleh nilai $\text{Sig.} < \alpha$ (0,05) sehingga H_0 ditolak (*), berarti rata-rata rasio absorpsi air tablet ko-proses dari kedelapan formula menunjukkan bahwa ada perbedaan yang signifikan antar formula yaitu formula 1, formula 3, formula 5, dan formula 7 menunjukkan perbedaan yang signifikan terhadap formula 6.

LAMPIRAN AJ

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

FORMULA OPTIMUM

(One-Sample T Test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Carrs_index	3	19.3300	1.16047	.67000

One-Sample Test

	Test Value = 19.31					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Carrs_index	.015	2	.989	.01000	-2.8728	2.8928

Keterangan: $T_{hitung} (0,015) < T_{tabel} (0,05) (2) (4,303)$, yang menunjukkan nilai *Carr's index* granul ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AK
HASIL UJI STATISTIK *HAUSNER RATIO* GRANUL KO-PROSES
FORMULA OPTIMUM
(*One-Sample T Test*)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Hausner_ratio	3	1.2367	.02309	.01333

One-Sample Test

	Test Value = 1.23					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Hausner_ratio	.500	2	.667	.00667	-.0507	.0640

Keterangan: $T_{hitung} (0,500) < T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan nilai *Hausner ratio* granul ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AL

HASIL UJI STATISTIK KEKERASAN TABLET KO-PROSES

FORMULA OPTIMUM

(One-Sample T test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Kekerasan	3	2.4133	.12220	.07055

One-Sample Test

	Test Value = 2.62					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Kekerasan	-2.929	2	.099	-.20667	-.5102	.0969

Keterangan: $T_{hitung} (2,929) < T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan kekerasan tablet ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AM

HASIL UJI STATISTIK KERAPUHAN TABLET KO-PROSES

FORMULA OPTIMUM

(One-Sample T test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Kerapuhan	3	.1733	.07095	.04096

One-Sample Test

	Test Value = 0.34					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Kerapuhan	-4.069	2	.055	-.16667	-.3429	.0096

Keterangan: $T_{hitung} (4.069) < T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan kerapuhan tablet ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AN

HASIL UJI STATISTIK WAKTU HANCUR TABLET KO-PROSES

FORMULA OPTIMUM

(One-Sample T test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Waktu_hancur	3	5.2000	.20000	.11547

One-Sample Test

	Test Value = 5					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Waktu_hancur	1.732	2	.225	.20000	-.2968	.6968

Keterangan: $T_{hitung} (1,732) < T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan waktu hancur tablet ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AO

**HASIL UJI STATISTIK WAKTU PEMBASAHAN TABLET KO-
PROSES FORMULA OPTIMUM**

(One-Sample T test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Waktu_pembasahan	3	39.3333	3.55715	2.05372

One-Sample Test

	Test Value = 28.93					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Waktu_pembasahan	5.066	2	.037	10.40333	1.5669	19.2398

Keterangan: $T_{hitung} (5.066) > T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan waktu pembasahan tablet ko-proses optimum memiliki perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AP

HASIL UJI STATISTIK RASIO ABSORPSI AIR TABLET KO-

PROSES FORMULA OPTIMUM

(One-Sample T test)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Rasio_absorpsi_air	3	1.5050E2	10.65963	6.15434

One-Sample Test

	Test Value = 152.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Rasio_absorpsi_air	-.324	2	.776	-1.99667	-28.4767	24.4833

Keterangan: $T_{hitung} (0,324) < T_{tabel (0,05) (2)} (4,303)$, yang menunjukkan rasio absorpsi air tablet ko-proses optimum tidak ada perbedaan yang bermakna terhadap hasil teoritis.

LAMPIRAN AQ
HASIL UJI STATISTIK STABILITAS TABLET KO-PROSES
OPTIMUM
(Paired-Sample T test)

Hasil Uji Stabilitas Kekerasan Tablet Ko-proses

Group Statistics

Stabilitas		N	Mean	Std. Deviation	Std. Error Mean
Kekerasan	Sebelum	3	2.4133	.12220	.07055
	Sesudah	3	2.3800	.14933	.08622

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	.293	.617	.299	4	.780	.03333	.11141	-.27598	.34264
	Equal variances not assumed			.299	3.849	.780	.03333	.11141	-.28081	.34748

Keterangan: $T_{hitung} (0,299) < T_{tabel} (0,05) (4) (2,776)$, yang menunjukkan kekerasan tablet ko-proses optimum tidak memiliki perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Kerapuhan Tablet Ko-proses

Group Statistics

Stabilitas		N	Mean	Std. Deviation	Std. Error Mean
Kerapuhan	Sebelum	3	.1733	.07095	.04096
	Sesudah	3	.2367	.08145	.04702

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Kerapuhan	Equal variances assumed	.191	.685	1.016	4	.367	-.06333	.06236	-.23648	.10981
	Equal variances not assumed			1.016	3.926	.368	-.06333	.06236	-.23777	.11110

Keterangan: $T_{hitung} (1,016) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan kerapuhan tablet ko-proses optimum tidak memiliki perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Waktu Hancur Tablet Ko-proses

Group Statistics

	Stabilitas	N	Mean	Std. Deviation	Std. Error Mean
Waktu_hancur	Sebelum	3	5.2000	.20000	.11547
	Sesudah	3	5.3333	.11547	.06667

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Waktu_hancur	Equal variances assumed	.400	.561	1.000	4	.374	-.13333	.13333	.50353	-.23686
	Equal variances not assumed			1.000	3.200	.387	-.13333	.13333	.54304	-.27638

Keterangan: $T_{hitung} (1,000) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan waktu hancur tablet ko-proses optimum tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Waktu Pembasahan Tablet Ko-proses

Group Statistics

	Stabilitas	N	Mean	Std. Deviation	Std. Error Mean
Waktu_pembasahan	Sebelum	3	39.3333	3.55715	2.05372
	Sesudah	3	30.9333	6.57673	3.79707

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Waktu_pembasahan	Equal variances assumed	1.998	.230	1.946	4	.124	8.40000	4.31689	3.58561	20.38561
	Equal variances not assumed			1.946	3.078	.145	8.40000	4.31689	5.14362	21.94362

Keterangan: $T_{hitung} (1,946) < T_{tabel} (0,05) (4) (2,776)$, yang menunjukkan waktu pembasahan tablet ko-proses optimum tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Rasio Absorpsi Air Tablet Ko-proses

Group Statistics

	Stabilitas	N	Mean	Std. Deviation	Std. Error Mean
Rasio_absorpsi_air	Sebelum	3	1.5050E2	10.65963	6.15434
	Sesudah	3	1.5375E2	9.70492	5.60314

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rasio_absorpsi_air	Equal variances assumed	.065	.811	-.390	4	.716	-3.25000	8.32292	26.35814	19.85814
	Equal variances not assumed			-.390	3.965	.716	-3.25000	8.32292	26.43813	19.93813

Keterangan: $T_{hitung} (0,390) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan rasio absorpsi air tablet ko-proses optimum tidak memiliki perbedaan yang bermakna sebelum dan setelah uji stabilitas.

LAMPIRAN AR

HASIL UJI STATISTIK STABILITAS TABLET ODT

DOMPERIDONE

(Independent-Sample T test)

Hasil Stabilitas Uji Kekerasan Tablet ODT

Group Statistics					
Stabilitas		N	Mean	Std. Deviation	Std. Error Mean
Kekerasan	Sebelum	3	2.5733	.15535	.08969
	Sesudah	3	2.4900	.19000	.10970

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Kekerasan	Equal variances assumed	.166	.705	.588	4	.588	.08333	.14170	-.31008	.47674
	Equal variances not assumed			.588	3.848	.589	.08333	.14170	-.31628	.48295

Keterangan: $T_{hitung} (0,588) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan kekerasan tablet ODT domperidone tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Kerapuhan Tablet ODT Domperidone

Group Statistics

Stabilitas		N	Mean	Std. Deviation	Std. Error Mean
Kerapuhan	Sebelum	3	.2067	.04041	.02333
	Sesudah	3	.3067	.06028	.03480

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Kerapuhan	Equal variances assumed	.325	.599	2.387	4	.075	-.10000	.04190	-.21633	.01633
	Equal variances not assumed			2.387	3.496	.085	-.10000	.04190	-.22326	.02326

Keterangan: $T_{hitung} (2,387) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan kerapuhan tablet ODT domperidone tidak memiliki perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Waktu Hancur Tablet ODT Domperidone

Group Statistics

	Stabilitas	N	Mean	Std. Deviation	Std. Error Mean
Waktu_hancur	Sebelum	3	74.8000	5.38145	3.10698
	Sesudah	3	73.7333	5.34540	3.08617

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Waktu_hancur	Equal variances assumed	.003	.960	.244	4	.820	1.06667	4.37924	-11.09206	13.22540
	Equal variances not assumed			.244	4.000	.820	1.06667	4.37924	-11.09228	13.22561

Keterangan: $T_{hitung} (0,244) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan waktu hancur tablet ODT domperidone tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Waktu Pembasahan Tablet ODT Domperidone

Group Statistics

	Stabilitas	N	Mean	Std. Deviation	Std. Error Mean
Waktu_pembasahan	Sebelum	3	90.9333	12.79427	7.38677
	Sesudah	3	78.4667	26.19949	15.12628

Independent Samples Test

		Levene's Test for Equality of Variance s		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Waktu_pembasahan	Equal variance s assumed	2.988	.159	.741	4	.500	12.46667	16.83356	34.27080	-59.20413
	Equal variance s not assumed			.741	2.903	.514	12.46667	16.83356	42.13700	-67.07034

Keterangan: $T_{hitung} (0,741) < T_{tabel} (0,05) (4) (2,776)$, yang menunjukkan waktu pembasahan tablet ODT domperidone tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

Hasil Uji Stabilitas Rasio Absorpsi Air Tablet ODT Domperidone

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Rasio_Absorpsi_Air	1.1096E2	3	10.58470	6.11108
	Rasio_Absorpsi_Air_setelah_uji_stabilitas	1.1558E2	3	12.85084	7.41943

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Rasio_absorpsi_air	Sebelum	3	1.1096E2	10.58470	6.11108
	Sesudah	3	1.1558E2	12.85084	7.41943

Independent Samples Test

		Levene's Test for Equality of Variance s		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Rasio_absorpsi_ air	Equal variance s assumed	.293	.617	.481	4	.656	-4.62000	9.61214	31.30759	22.06759
	Equal variance s not assumed			.481	3.858	.657	-4.62000	9.61214	31.69845	22.45845

Keterangan: $T_{hitung} (0,481) < T_{tabel (0,05) (4)} (2,776)$, yang menunjukkan rasio absorpsi air tablet ODT domperidone tidak ada perbedaan yang bermakna sebelum dan setelah uji stabilitas.

LAMPIRAN AS

HASIL UJI STATISTIK PENETAPAN KADAR

ODT DOMPERIDONE DALAM PELARUT HCl 0,1 N

(One Way Anova)

Descriptives								
P.K								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula ODT	3	94.2333	.70946	.40961	92.4709	95.9957	93.60	95.00
Pembanding 1	3	99.2333	.64291	.37118	97.6363	100.8304	98.50	99.70
Pembanding 2	3	98.8667	1.78979	1.03333	94.4206	103.3127	96.90	100.40
Total	9	97.4444	2.61826	.87275	95.4319	99.4570	93.60	100.40

Test of Homogeneity of Variances

P.K			
Levene Statistic	df1	df2	Sig.
2.496	2	6	.163

ANOVA					
P.K					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	46.602	2	23.301	16.967	.003
Within Groups	8.240	6	1.373		
Total	54.842	8			

Keterangan :

$F_{hitung} (16,967) > F_{tabel} (0,05) (2,6) (5,14)$ maka H_0 ditolak dan menunjukkan hasil penetapan kadar memiliki perbedaan yang bermakna antar formula ODT hasil percobaan dengan tablet pembanding.

LAMPIRAN AT
HASIL UJI STATISTIK PERSEN OBAT TERLEPAS TABLET
ODT DOMPERIDONE PADA t = 30 MENIT
(One Way Anova)

Descriptives

%Obat
Terlepas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula ODT	3	81.9567	2.29705	1.32620	76.2505	87.6629	79.38	83.79
Pembanding 1	3	72.4433	2.29531	1.32520	66.7415	78.1452	70.56	75.00
Pembanding 2	3	69.8333	1.15249	.66539	66.9704	72.6963	68.55	70.78
Total	9	74.7444	5.78832	1.92944	70.2951	79.1937	68.55	83.79

Test of Homogeneity of Variances

%Obat Terlepas

Levene Statistic	df1	df2	Sig.
1.103	2	6	.391

ANOVA

%Obat Terlepas					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	244.291	2	122.145	30.863	.001
Within Groups	23.746	6	3.958		
Total	268.037	8			

Keterangan :

$F_{hitung} (30,863) > F_{tabel} (0,05) (2,6) (5,14)$ maka H_0 ditolak dan menunjukkan persen obat terlepas memiliki perbedaan yang bermakna antar formula ODT hasil percobaan dengan tablet pembanding.

LAMPIRAN AU

HASIL UJI STATISTIK PERSEN EFISIENSI DISOLUSI

TABLET ODT DOMPERIDONE

(One Way Anova)

Descriptives								
%ED								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula ODT	3	80.8367	1.88559	1.08864	76.1526	85.5207	78.66	81.97
Pembanding 1	3	64.6333	.69644	.40209	62.9033	66.3634	64.14	65.43
Pembanding 2	3	59.8733	.70501	.40704	58.1220	61.6247	59.11	60.50
Total	9	68.4478	9.57694	3.19231	61.0863	75.8093	59.11	81.97

Test of Homogeneity of Variances

%ED

Levene Statistic	df1	df2	Sig.
4.586	2	6	.062

ANOVA

%ED					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	724.667	2	362.333	239.559	.000
Within Groups	9.075	6	1.513		
Total	733.742	8			

Keterangan :

$F_{hitung} (239,559) > F_{tabel} (0,05) (2,6) (5,14)$ maka H_0 ditolak dan ada perbedaan yang bermakna antar formula ODT hasil percobaan dengan tablet pembanding pada persen efisiensi disolusi ODT domperidone.

LAMPIRAN AV

UJI F KURVA BAKU DENGAN HCl 0,1 N UNTUK UJI

PENETAPAN KADAR DOMPERIDONE

Replikasi	C _(ppm)	Abs	X ²	Y ²	XY
I	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
	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
II	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
	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
III	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
	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

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

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

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

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

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

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

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

LAMPIRAN AW

HASIL UJI ANAVA *CARR'S INDEX* DENGAN *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	69.41	7	9.92	16.25	< 0.0001	sig.
A-konsentrasi PVP K-30	34.25	1	34.25	56.13	< 0.0001	
B-Konsentrasi CP	6.97	1	6.97	11.42	0.0038	
C-Konsentrasi manitol	3.44	1	3.44	5.64	0.0304	
AB	3.38	1	3.38	5.54	0.0317	
AC	5.00	1	5.00	8.19	0.0113	
BC	6.99	1	6.99	11.45	0.0038	
ABC	9.39	1	9.39	15.38	0.0012	
Pure Error	9.76	16	0.61			
Cor Total	79.17	23				

The Model F-value of 16.25 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

In this case A, B, C, AB, AC, BC, ABC 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.	0.78	R-Squared	0.8767
Mean	22.35	Adj R-Squared	0.8227
C.V. %	3.50	Pred R-Squared	0.7226
PRESS	21.97	Adeq Precision	11.759

The "Pred R-Squared" of 0.7226 is in reasonable agreement with the "Adj R-Squared" of 0.8227.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 11.759 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	22.35	1	0.16	22.01	22.69	
A-konsentrasi PVP K-30	-1.19	1	0.16	-1.53	-0.86	1.00
B-Konsentrasi CP	0.54	1	0.16	0.20	0.88	1.00
C-Konsentrasi manitol	-0.38	1	0.16	-0.72	-0.041	1.00
AB	-0.38	1	0.16	-0.71	-0.037	1.00
AC	-0.46	1	0.16	-0.79	-0.12	1.00
BC	-0.54	1	0.16	-0.88	-0.20	1.00
ABC	-0.63	1	0.16	-0.96	-0.29	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Carr's index} &= \\
 &+22.35 \\
 &-1.19 \quad * A \\
 &+0.54 \quad * B \\
 &-0.38 \quad * C \\
 &-0.38 \quad * A * B \\
 &-0.46 \quad * A * C \\
 &-0.54 \quad * B * C \\
 &-0.63 \quad * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Carr's index} &= \\
 &+22.34792 \\
 &-1.19458 \quad * \text{konsentrasi PVP K-30} \\
 &+0.53875 \quad * \text{Konsentrasi CP} \\
 &-0.37875 \quad * \text{Konsentrasi manitol} \\
 &-0.37542 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} \\
 &-0.45625 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi manitol} \\
 &-0.53958 \quad * \text{Konsentrasi CP} * \text{Konsentrasi manitol} \\
 &-0.62542 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} * \text{Konsentrasi manitol}
 \end{aligned}$$

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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 AX

HASIL UJI ANAVA HAUSNER RATIO DENGAN 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
A-konsentrasi PVP K-30	8.438E-003	1	8.438E-003	47.09	< 0.0001 sig.
B-Konsentrasi CP	1.837E-003	1	1.837E-003	10.26	0.0055
C-Konsentrasi manitol	1.204E-003	1	1.204E-003	6.72	0.0196
AB	1.504E-003	1	1.504E-003	8.40	0.0105
AC	1.837E-003	1	1.837E-003	10.26	0.0055
BC	1.504E-003	1	1.504E-003	8.40	0.0105
ABC	2.204E-003	1	2.204E-003	12.30	0.0029
Pure Error	2.867E-003	16	1.792E-004		
Cor Total	0.021	23			

The Model F-value of 14.77 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

In this case A, B, C, AB, AC, BC, ABC 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.	0.013	R-Squared	0.8660
Mean	1.28	Adj R-Squared	0.8074
C.V. %	1.04	Pred R-Squared	0.6985
PRESS	6.450E-003	Adeq Precision	11.646

The "Pred R-Squared" of 0.6985 is in reasonable agreement with the "Adj R-Squared" of 0.8074.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 11.646 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard	95% CI	95% CI	VIF
	Estimate		Error	Low	High	
Intercept	1.28	1	2.732E-003	1.28	1.29	
A-konsentrasi PVP K-30	-0.019	1	2.732E-003	-0.025	-0.013	1.00
B-Konsentrasi CP	8.750E-003	1	2.732E-003	2.958E-003	0.015	1.00
C-Konsentrasi manitol	-7.083E-003	1	2.732E-003	-0.013	-1.291E-003	1.00
AB	-7.917E-003	1	2.732E-003	-0.014	-2.125E-003	1.00
AC	-8.750E-003	1	2.732E-003	-0.015	-2.958E-003	1.00
BC	-7.917E-003	1	2.732E-003	-0.014	-2.125E-003	1.00
ABC	-9.583E-003	1	2.732E-003	-0.015	-3.791E-003	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 &\text{Hausner ratio} = \\
 &+1.28 \\
 &-0.019 \quad * A \\
 &+8.750E-003 \quad * B \\
 &-7.083E-003 \quad * C \\
 &-7.917E-003 \quad * A * B \\
 &-8.750E-003 \quad * A * C \\
 &-7.917E-003 \quad * B * C \\
 &-9.583E-003 \quad * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 &\text{Hausner ratio} = \\
 &+1.28458 \\
 &-0.018750 \quad * \text{ konsentrasi PVP K-30} \\
 &+8.75000E-003 \quad * \text{ Konsentrasi CP} \\
 &-7.08333E-003 \quad * \text{ Konsentrasi manitol} \\
 &-7.91667E-003 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi CP} \\
 &-8.75000E-003 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi manitol} \\
 &-7.91667E-003 \quad * \text{ Konsentrasi CP} * \text{ Konsentrasi manitol} \\
 &-9.58333E-003 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi CP} * \text{ Konsentrasi manitol}
 \end{aligned}$$

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In the Diagnostics Node, Select Case Statistics from the View Menu.

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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 AY

HASIL UJI ANAVA KERAPUHAN DENGAN *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	0.24	7	0.035	1.82	0.1512 not sig.
<i>A-konsentrasi PVP K-30</i>	<i>2.042E-004</i>	<i>1</i>	<i>2.042E-004</i>	<i>0.011</i>	<i>0.9186</i>
<i>B-Konsentrasi CP</i>	<i>0.038</i>	<i>1</i>	<i>0.038</i>	<i>1.98</i>	<i>0.1781</i>
<i>C-Konsentrasi manitol</i>	<i>0.12</i>	<i>1</i>	<i>0.12</i>	<i>6.43</i>	<i>0.0220</i>
<i>AB</i>	<i>0.050</i>	<i>1</i>	<i>0.050</i>	<i>2.61</i>	<i>0.1256</i>
<i>AC</i>	<i>0.020</i>	<i>1</i>	<i>0.020</i>	<i>1.05</i>	<i>0.3215</i>
<i>BC</i>	<i>2.204E-003</i>	<i>1</i>	<i>2.204E-003</i>	<i>0.12</i>	<i>0.7375</i>
<i>ABC</i>	<i>0.011</i>	<i>1</i>	<i>0.011</i>	<i>0.57</i>	<i>0.4605</i>
Pure Error	0.30	16	0.019		
Cor Total	0.55	23			

The "Model F-value" of 1.82 implies the model is not significant relative to the noise. There is a 15.12 % 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 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.	0.14	R-Squared	0.4438
Mean	0.34	Adj R-Squared	0.2005
C.V. %	40.15	Pred R-Squared	-0.2513
PRESS	0.68	Adeq Precision	4.655

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 greater than 4 is desirable. Your ratio of 4.655 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard	95% CI		VIF
	Estimate		Error	Low	High	
Intercept	0.34	1	0.028	0.28	0.40	
A-konsentrasi PVP K-30	-2.917E-003	1	0.028	-0.062	0.057	1.00
B-Konsentrasi CP	0.040	1	0.028	-0.020	0.099	1.00
C-Konsentrasi manitol	-0.071	1	0.028	-0.13	-0.012	1.00
AB	0.045	1	0.028	-0.014	0.10	1.00
AC	-0.029	1	0.028	-0.088	0.031	1.00
BC	-9.583E-003	1	0.028	-0.069	0.050	1.00
ABC	0.021	1	0.028	-0.038	0.081	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Kerapuhan} &= \\
 &+0.34 \\
 &-2.917\text{E-}003 \quad * A \\
 &+0.040 \quad * B \\
 &-0.071 \quad * C \\
 &+0.045 \quad * A * B \\
 &-0.029 \quad * A * C \\
 &-9.583\text{E-}003 \quad * B * C \\
 &+0.021 \quad * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Kerapuhan} &= \\
 &+0.34292 \\
 &-2.91667\text{E-}003 \quad * \text{ konsentrasi PVP K-30} \\
 &+0.039583 \quad * \text{ Konsentrasi CP} \\
 &-0.071250 \quad * \text{ Konsentrasi manitol} \\
 &+0.045417 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi CP} \\
 &-0.028750 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi manitol} \\
 &-9.58333\text{E-}003 \quad * \text{ Konsentrasi CP} * \text{ Konsentrasi manitol} \\
 &+0.021250 \quad * \text{ konsentrasi PVP K-30} * \text{ Konsentrasi CP} * \text{ Konsentrasi manitol}
 \end{aligned}$$

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

LAMPIRAN AZ

HASIL UJI ANAVA KEKERASAN DENGAN *DESIGN EXPERT*

Response	4 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	5.31	7	0.76	9.45	0.0001 sig.
<i>A-konsentrasi PVP K-30</i>	1.02	1	1.02	12.73	0.0026
<i>B-Konsentrasi CP</i>	2.38	1	2.38	29.62	< 0.0001
<i>C-Konsentrasi manitol</i>	0.11	1	0.11	1.31	0.2686
<i>AB</i>	0.22	1	0.22	2.73	0.1183
<i>AC</i>	1.32	1	1.32	16.47	0.0009
<i>BC</i>	0.17	1	0.17	2.06	0.1707
<i>ABC</i>	0.10	1	0.10	1.25	0.2803
Pure Error	1.28	16	0.080		
Cor Total	6.59	23			

The Model F-value of 9.45 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

In this case A, B, 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.	0.28	R-Squared	0.8053
Mean	2.60	Adj R-Squared	0.7201
C.V. %	10.90	Pred R-Squared	0.5619
PRESS	2.89	Adeq Precision	10.256

The "Pred R-Squared" of 0.5619 is in reasonable agreement with the "Adj R-Squared" of 0.7201.

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

Your ratio of 10.256 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	2.60	1	0.058	2.47	2.72	
A-konsentrasi PVP K-30	-0.21	1	0.058	-0.33	-0.084	1.00
B-Konsentrasi CP	-0.31	1	0.058	-0.44	-0.19	1.00
C-Konsentrasi manitol	0.066	1	0.058	-0.056	0.19	1.00
AB	0.095	1	0.058	-0.027	0.22	1.00
AC	0.23	1	0.058	0.11	0.36	1.00
BC	0.083	1	0.058	-0.040	0.21	1.00
ABC	0.065	1	0.058	-0.058	0.19	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Kekerasan} &= \\
 &+2.60 \\
 &-0.21 * A \\
 &-0.31 * B \\
 &+0.066 * C \\
 &+0.095 * A * B \\
 &+0.23 * A * C \\
 &+0.083 * B * C \\
 &+0.065 * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Kekerasan} &= \\
 &+2.59708 \\
 &-0.20625 * \text{konsentrasi PVP K-30} \\
 &-0.31458 * \text{Konsentrasi CP} \\
 &+0.066250 * \text{Konsentrasi manitol} \\
 &+0.095417 * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} \\
 &+0.23458 * \text{konsentrasi PVP K-30} * \text{Konsentrasi manitol} \\
 &+0.082917 * \text{Konsentrasi CP} * \text{Konsentrasi manitol} \\
 &+0.064583 * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} * \text{Konsentrasi manitol}
 \end{aligned}$$

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

LAMPIRAN BA

HASIL UJI ANAVA WAKTU HANCUR DENGAN *DESIGN EXPERT*

Response	5	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	260.13	7	37.16	29.11	< 0.0001	sig.
<i>A-konsentrasi PVP K-30</i>	89.71	1	89.71	70.27	< 0.0001	
<i>B-Konsentrasi CP</i>	107.53	1	107.53	84.22	< 0.0001	
<i>C-Konsentrasi manitol</i>	2.16	1	2.16	1.69	0.2118	
<i>AB</i>	20.17	1	20.17	15.80	0.0011	
<i>AC</i>	7.71	1	7.71	6.04	0.0258	
<i>BC</i>	6.41	1	6.41	5.02	0.0396	
<i>ABC</i>	26.46	1	26.46	20.73	0.0003	
Pure Error	20.43	16	1.28			
Cor Total	280.56	23				

The Model F-value of 29.11 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

In this case A, B, AB, AC, BC, ABC are significant model terms.

Values greater than 0.1000 indicate the model terms are not significant.

If there are many insignificant model terms (not counting those required to support hierarchy), model reduction may improve your model.

Std. Dev.	1.13	R-Squared	0.9272
Mean	5.40	Adj R-Squared	0.8953
C.V. %	20.92	Pred R-Squared	0.8362
PRESS	45.96	Adeq Precision	16.556

The "Pred R-Squared" of 0.8362 is in reasonable agreement with the "Adj R-Squared" of 0.8953.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 16.556 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	5.40	1	0.23	4.91	5.89	
A-konsentrasi PVP K-30	1.93	1	0.23	1.44	2.42	1.00
B-Konsentrasi CP	-2.12	1	0.23	-2.61	-1.63	1.00
C-Konsentrasi manitol	-0.30	1	0.23	-0.79	0.19	1.00
AB	-0.92	1	0.23	-1.41	-0.43	1.00
AC	-0.57	1	0.23	-1.06	-0.078	1.00
BC	0.52	1	0.23	0.028	1.01	1.00
ABC	1.05	1	0.23	0.56	1.54	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Waktu hancur} &= \\
 &+5.40 \\
 &+1.93 \quad * A \\
 &-2.12 \quad * B \\
 &-0.30 \quad * C \\
 &-0.92 \quad * A * B \\
 &-0.57 \quad * A * C \\
 &+0.52 \quad * B * C \\
 &+1.05 \quad * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Waktu hancur} &= \\
 &+5.40000 \\
 &+1.93333 \quad * \text{konsentrasi PVP K-30} \\
 &-2.11667 \quad * \text{Konsentrasi CP} \\
 &-0.30000 \quad * \text{Konsentrasi manitol} \\
 &-0.91667 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} \\
 &-0.56667 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi manitol} \\
 &+0.51667 \quad * \text{Konsentrasi CP} * \text{Konsentrasi manitol} \\
 &+1.05000 \quad * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} * \text{Konsentrasi manitol}
 \end{aligned}$$

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

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

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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 BB

HASIL UJI ANAVA WAKTU PEMBASAHAN DENGAN *DESIGN*

EXPERT

Response	6	Waktu pembasahan			
ANOVA for selected factorial model					
Analysis of variance table [Partial sum of squares - Type III]					
	Sum of	Mean	F	p-value	
Source	Squares	df	Square	Value	Prob > F
Model	14192.47	7	2027.50	13.09	< 0.0001
<i>A-konsentrasi PVP K-30</i>	8362.67	1	8362.67	54.01	< 0.0001
<i>B-Konsentrasi CP</i>	1673.34	1	1673.34	10.81	0.0046
<i>C-Konsentrasi manitol</i>	1014.00	1	1014.00	6.55	0.0210
<i>AB</i>	624.24	1	624.24	4.03	0.0618
<i>AC</i>	1404.54	1	1404.54	9.07	0.0083
<i>BC</i>	443.76	1	443.76	2.87	0.1098
<i>ABC</i>	669.93	1	669.93	4.33	0.0539
Pure Error	2477.28	16	154.83		
Cor Total	16669.75	23			

The Model F-value of 13.09 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

In this case A, B, 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.	12.44	R-Squared	0.8514
Mean	28.28	Adj R-Squared	0.7864
C.V. %	43.99	Pred R-Squared	0.6656
PRESS	5573.88	Adeq Precision	10.848

The "Pred R-Squared" of 0.6656 is in reasonable agreement with the "Adj R-Squared" of 0.7864.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 10.848 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard	95% CI		VIF
	Estimate		Error	Low	High	
Intercept	28.28	1	2.54	22.90	33.67	
A-konsentrasi PVP K-30	18.67	1	2.54	13.28	24.05	1.00
B-Konsentrasi CP	-8.35	1	2.54	-13.73	-2.97	1.00
C-Konsentrasi manitol	-6.50	1	2.54	-11.88	-1.12	1.00
AB	-5.10	1	2.54	-10.48	0.28	1.00
AC	-7.65	1	2.54	-13.03	-2.27	1.00
BC	4.30	1	2.54	-1.08	9.68	1.00
ABC	5.28	1	2.54	-0.10	10.67	

Final Equation in Terms of Coded Factors:

Waktu pembasahan =
+28.28
+18.67 * A
-8.35 * B
-6.50 * C
-5.10 * A * B
-7.65 * A * C
+4.30 * B * C
+5.28 * A * B * C

Final Equation in Terms of Actual Factors:

Waktu pembasahan =
+28.28333
+18.66667 * konsentrasi PVP K-30
-8.35000 * Konsentrasi CP
-6.50000 * Konsentrasi manitol
-5.10000 * konsentrasi PVP K-30 * Konsentrasi CP
-7.65000 * konsentrasi PVP K-30 * Konsentrasi manitol
+4.30000 * Konsentrasi CP * Konsentrasi manitol
+5.28333 * konsentrasi PVP K-30 * Konsentrasi CP * Konsentrasi manitol

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

LAMPIRAN BC

HASIL UJI ANAVA RASIO ABSORPSI AIR DENGAN *DESIGN*

EXPERT

Response	7	Rasio absorpsi				
ANOVA for selected factorial model						
Analysis of variance table [Partial sum of squares - Type III]						
	Sum of	Mean	F	p-value		
Source	Squares	df	Square	Value	Prob > F	
Model	5441.34	7	777.33	5.54	0.0022	sig.
A-konsentrasi PVP K-30	1883.39	1	1883.39	13.42	0.0021	
B-Konsentrasi CP	992.66	1	992.66	7.07	0.0171	
C-Konsentrasi manitol	2098.10	1	2098.10	14.95	0.0014	
AB	137.04	1	137.04	0.98	0.3378	
AC	33.44	1	33.44	0.24	0.6321	
BC	224.52	1	224.52	1.60	0.2240	
ABC	72.18	1	72.18	0.51	0.4836	
Pure Error	2245.23	16	140.33			
Cor Total	7686.57	23				

The Model F-value of 5.54 implies the model is significant. There is only a 0.22% 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 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.	11.85	R-Squared	0.7079
Mean	155.92	Adj R-Squared	0.5801
C.V. %	7.60	Pred R-Squared	0.3428
PRESS	5051.76	Adeq Precision	7.713

The "Pred R-Squared" of 0.3428 is not as close to the "Adj R-Squared" of 0.5801 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 7.713 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient	df	Standard Error	95% CI		VIF
	Estimate			Low	High	
Intercept	155.92	1	2.42	150.79	161.04	
A-konsentrasi PVP K-30	-8.86	1	2.42	-13.98	-3.73	1.00
B-Konsentrasi CP	6.43	1	2.42	1.31	11.56	1.00
C-Konsentrasi manitol	-9.35	1	2.42	-14.48	-4.22	1.00
AB	2.39	1	2.42	-2.74	7.52	1.00
AC	1.18	1	2.42	-3.95	6.31	1.00
BC	3.06	1	2.42	-2.07	8.18	1.00
ABC	1.73	1	2.42	-3.39	6.86	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Rasio absorpsi} &= \\
 +155.92 & \\
 -8.86 & * A \\
 +6.43 & * B \\
 -9.35 & * C \\
 +2.39 & * A * B \\
 +1.18 & * A * C \\
 +3.06 & * B * C \\
 +1.73 & * A * B * C
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Rasio absorpsi} &= \\
 +155.91842 & \\
 -8.85858 & * \text{konsentrasi PVP K-30} \\
 +6.43125 & * \text{Konsentrasi CP} \\
 -9.34992 & * \text{Konsentrasi manitol} \\
 +2.38958 & * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} \\
 +1.18042 & * \text{konsentrasi PVP K-30} * \text{Konsentrasi manitol} \\
 +3.05858 & * \text{Konsentrasi CP} * \text{Konsentrasi manitol} \\
 +1.73425 & * \text{konsentrasi PVP K-30} * \text{Konsentrasi CP} * \text{Konsentrasi manitol}
 \end{aligned}$$

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