

LAMPIRAN A
HASIL IBUPROFEN TERLARUT DALAM POLIETILEN
GLIKOL 400 DAN AIR SELAMA 24 JAM

Jumlah Ibuprofen Terlarut dalam Polietilen Glikol 400 Selama 24 Jam

W sampel (gram)	Abs.	C sampel (µg/ml)	Cs x FP (µg/ml)	Rata-rata (µg/ml)
11,6244	0,660	356,61	356610	
11,703	0,673	363,70	363700	350976
11,5228	0,616	332,62	332620	

Jumlah Ibuprofen Terlarut dalam Air Selama 24 Jam

W sampel (gram)	Abs.	C sampel (µg/ml)	Cs x FP (µg/ml)	Rata-rata (µg/ml)
9,8812	0,072	35,93	179,67	
9,2858	0,063	31,03	155,13	166,94
9,7473	0,067	33,21	166,03	

LAMPIRAN B
HASIL UJI KERAGAMAN BOBOT TABLET LIKUISOLID
IBUPROFEN

Hasil Uji Keragaman Bobot Tablet Formulasi A

No	Replikasi I		Replikasi II		Replikasi III	
	Bobot Tablet	Y	Bobot Tablet	Y	Bobot Tablet	Y
	(mg)	(%)	(mg)	(%)	(mg)	(%)
1	764,6	99,25	756,8	99,96	758,9	101,12
2	763,1	99,06	775,3	102,41	774,2	103,16
3	763	99,05	754,9	99,71	756,2	100,76
4	763,8	99,15	757,9	100,11	756,7	100,83
5	756,8	98,24	760,0	100,39	755,8	100,71
6	770,2	99,98	764,2	100,94	756,3	100,77
7	768,3	99,73	759,9	100,37	770,3	102,64
8	773,5	100,41	755,8	99,83	754,8	100,57
9	767,8	99,67	763,2	100,81	749,9	99,92
10	764,7	99,27	762,5	100,72	745,6	99,35
Rata-rata	765,58	99,38	761,05	100,52	757,87	100,98
PK (%)	99,38		100,52		100,98	
SD	0,60		0,78		1,14	
KV	0,60		0,78		1,13	

Keterangan: PK = Penetapan Kadar
SD = Standart Deviasi
KV = Koefisien Variasi

Lanjutan Lampiran B

Hasil Uji Keragaman Bobot Formulasi B

No	Replikasi I		Replikasi II		Replikasi III	
	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)
1	776,8	99,43	760,4	100,33	755,0	100,80
2	769,5	98,50	758,3	100,06	757,4	101,12
3	778,9	99,70	748,9	98,82	754,6	100,75
4	768,5	98,37	759,2	100,18	749,5	100,07
5	769,7	98,53	750,9	99,08	758,2	101,23
6	783,4	100,28	744,9	98,29	755,3	100,84
7	775,9	99,32	754,3	99,53	749,5	100,07
8	765,3	97,96	759,1	100,16	743,0	99,20
9	769,6	98,51	753,0	99,36	743,2	99,23
10	785,1	100,50	760,9	100,40	747,5	99,80
Rata-rata	774,27	99,11	754,99	99,62	751,32	100,31
PK (%)	99,11		99,62		100,31	
SD	0,86		0,72		0,75	
KV	0,87		0,73		0,74	

Lanjutan Lampiran B

Hasil Uji Keragaman Bobot Formula C

No	Replikasi I		Replikasi II		Replikasi III	
	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)
1	757,9	97,07	758,5	98,82	778,5	101,19
2	769,0	98,50	776,8	101,21	765,2	99,46
3	789,5	101,12	780,5	101,69	755,5	98,20
4	779,4	99,83	760,5	99,09	759,4	98,71
5	782,0	100,16	749,5	97,65	747,9	97,21
6	781,3	100,07	776,7	101,20	780,8	101,49
7	776,9	99,51	778,2	101,39	769,9	100,07
8	780,5	99,97	770,5	100,39	757,8	98,50
9	780,7	99,99	769,5	100,26	759,1	98,67
10	782,1	100,17	769,1	100,21	768,5	99,89
Rata-rata	777,93	99,64	768,98	100,19	764,26	99,34
PK (%)	99,64		100,19		99,34	
SD	1,11		1,30		1,34	
KV	1,12		1,30		1,35	

Lanjutan Lampiran B

Hasil Uji Keragaman Bobot Formula D

No	Replikasi I		Replikasi II		Replikasi III	
	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)	Bobot Tablet (mg)	Y (%)
1	757,9	99,43	754,8	98,30	768,4	99,74
2	769,0	100,89	769,8	100,25	766,5	99,49
3	750,5	98,46	753,9	98,18	753,1	97,75
4	766,4	100,55	760,0	98,98	755,8	98,10
5	755,3	99,09	768,4	100,07	778,4	101,04
6	770,6	101,10	758,1	98,73	769,4	99,87
7	754,9	99,04	761,5	99,17	755,6	98,08
8	765,4	100,42	765,7	99,72	763,1	99,05
9	773,5	101,48	745,2	97,05	773,5	100,40
10	770,2	101,05	771,4	100,46	769,4	99,87
Rata-rata	763,37	100,15	760,88	99,09	765,32	99,34
PK (%)	100,15		99,09		99,34	
SD	1,05		1,07		1,08	
KV	1,05		1,08		1,09	

LAMPIRAN C
HASIL UJI KESERAGAMAN KANDUNGAN TABLET
LIKUISOLID IBUPROFEN

Hasil uji Keseragaman Kandungan Tablet Formula A Replikasi I

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,534	764,6	287,90	286,73	100,41
0,524	763,1	282,45	286,16	98,70
0,528	763,0	284,63	286,13	99,48
0,531	763,8	286,26	286,43	99,94
0,520	756,8	280,27	283,80	98,75
0,533	770,2	287,36	288,83	99,49
0,541	768,3	291,72	288,11	101,25
0,528	773,5	284,63	290,06	98,13
0,527	767,8	284,08	287,93	98,67
0,526	764,7	283,54	286,76	98,88
			Rata-rata	99,37
			SD	0,95
			KV	0,95

Hasil Uji Keseragaman Kandungan Tablet Formula A ReplikasiII

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,522	756,8	281,36	283,80	99,14
0,541	775,3	291,72	290,74	100,34
0,519	754,9	279,72	283,09	98,81
0,532	757,9	286,81	284,21	100,91
0,530	760,0	285,72	285,00	100,25
0,526	764,2	283,54	286,58	98,94
0,527	759,9	284,08	284,96	99,69
0,521	755,8	280,81	283,43	99,08
0,531	763,2	286,26	286,20	100,02
0,533	762,5	287,36	285,94	100,50
			Rata-rata	99,77
			SD	0,74
			KV	0,74

Lanjutan Lampiran C

Hasil Uji Keseragaman Kandungan Tablet Formula A Replikasi III

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,522	758,9	281,36	284,59	98,86
0,536	774,2	288,99	290,33	99,54
0,523	756,2	281,90	283,58	99,41
0,534	756,7	287,90	283,76	101,46
0,522	755,8	281,36	283,43	99,27
0,531	756,3	286,26	283,61	100,94
0,526	770,3	283,54	288,86	98,16
0,525	754,8	282,99	283,05	99,98
0,520	749,9	280,27	281,21	99,66
0,523	745,6	281,90	279,60	100,82
			Rata-rata	99,81
			SD	1,01
			KV	1,01

Hasil Uji Keseragaman Kandungan Tablet Formula B Replikasi I

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,530	776,8	285,72	291,30	98,08
0,530	769,5	286,81	288,56	99,39
0,534	778,9	287,90	292,09	98,57
0,529	768,5	285,17	288,19	98,95
0,528	769,7	284,63	288,64	98,61
0,540	783,4	291,17	293,78	99,11
0,526	775,9	283,54	290,96	97,45
0,527	765,3	284,08	286,99	98,99
0,532	769,6	286,81	288,60	99,38
0,542	785,1	292,26	294,41	99,27
			Rata-rata	98,78
			SD	0,62
			KV	0,63

Lanjutan Lampiran C

Hasil Uji Keseragaman Kandungan Tablet Formula B Replikasi II

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,523	760,4	281,90	285,15	98,86
0,532	758,3	286,81	284,36	100,86
0,527	748,9	284,08	280,84	101,16
0,526	759,2	283,54	284,70	99,59
0,521	750,9	280,81	281,59	99,72
0,520	744,9	280,27	279,34	100,33
0,524	754,3	282,45	282,86	99,85
0,531	759,1	286,26	284,66	100,56
0,526	753,0	283,54	282,38	100,41
0,527	760,9	284,08	285,34	99,56
			Rata-rata	100,09
			SD	0,69
			KV	0,69

Hasil Uji Keragaman Kandungan Tablet Formula B ReplikasiIII

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,523	755,0	281,90	283,13	99,57
0,519	757,4	279,72	284,03	98,48
0,520	754,6	280,27	282,98	99,04
0,524	749,5	282,45	281,06	100,49
0,522	758,2	281,36	284,33	98,96
0,517	755,3	278,63	283,24	98,37
0,518	749,5	279,17	281,06	99,33
0,515	743,0	277,54	278,63	99,61
0,521	743,2	280,81	278,70	100,76
0,516	747,5	278,08	280,31	99,21
			Rata-rata	99,38
			SD	0,77
			KV	0,78

Lanjutan Lampiran C

Hasil Uji Keseragaman Kandungan Tablet Formula C Replikasi I

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,534	757,9	287,90	284,21	101,30
0,539	769,0	290,63	288,38	100,78
0,546	789,5	294,45	296,06	99,45
0,541	779,4	291,72	292,28	99,81
0,542	782,0	292,26	293,25	99,66
0,539	781,3	290,63	292,99	99,19
0,534	776,9	287,90	291,34	98,82
0,540	780,5	291,17	292,69	99,48
0,538	780,7	290,08	292,76	99,08
0,535	782,1	288,45	293,29	98,35
			Rata-rata	99,59
			SD	0,88
			KV	0,88

Hasil Uji Keseragaman Kandungan Tablet Formula C Replikasi II

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,528	758,5	284,63	284,44	100,07
0,538	776,8	290,08	291,30	99,58
0,539	780,5	290,63	292,69	99,30
0,527	760,5	284,08	285,19	99,61
0,524	749,5	282,45	281,06	100,49
0,531	776,7	286,26	291,26	98,28
0,537	778,2	289,54	291,83	99,22
0,529	770,5	285,17	288,94	98,70
0,535	769,5	288,45	288,56	99,96
0,526	769,1	283,54	288,41	98,31
			Rata-rata	99,35
			SD	0,74
			KV	0,75

Lanjutan Lampiran C

Hasil Uji Keseragaman Kandungan Tablet Formula C Replikasi III

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,538	778,5	290,08	291,94	99,36
0,531	765,2	286,26	286,95	99,76
0,526	755,5	283,54	283,31	100,08
0,525	759,4	282,99	284,78	99,37
0,529	747,9	285,17	280,46	101,68
0,537	780,8	289,54	292,80	98,89
0,534	769,9	287,90	288,71	99,72
0,525	757,8	282,99	284,18	99,58
0,526	759,1	283,54	284,66	99,60
0,535	768,5	288,45	288,19	100,09
			Rata-rata	99,81
			SD	0,74
			KV	0,75

Hasil Uji Keseragaman Kandungan Tablet Formula D Replikasi I

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,518	757,9	279,17	284,21	98,23
0,532	769	286,81	288,38	99,46
0,517	750,5	278,63	281,44	99,00
0,528	766,4	284,63	287,40	99,04
0,526	755,3	283,54	283,24	100,11
0,531	770,6	286,26	288,98	99,06
0,516	754,9	278,08	283,09	98,23
0,525	765,4	282,99	287,03	98,60
0,539	773,5	290,63	290,06	100,19
0,531	770,2	286,26	288,83	99,11
			Rata-rata	99,10
			SD	0,68
			KV	0,68

Lanjutan Lampiran C

Hasil Uji Keseragaman Kandungan Tablet Formula D Replikasi II

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,535	754,8	288,45	283,05	101,91
0,537	769,8	289,54	288,68	100,30
0,529	753,9	285,12	282,71	100,85
0,523	760,0	281,90	285,00	98,91
0,530	768,4	285,72	288,15	99,16
0,534	758,1	287,90	284,29	101,27
0,521	761,5	280,81	285,56	98,34
0,519	765,7	279,72	287,14	97,42
0,528	745,2	284,63	279,45	101,85
0,539	771,4	290,63	289,28	100,47
			Rata-rata	100,05
			SD	1,53
			KV	1,53

Hasil Uji Keseragaman Kandungan Tablet Formula D Replikasi III

Abs	W sampel (mg)	C sampel (µg/ml)	C teoritis (µg/ml)	Kadar (%)
0,534	768,4	287,90	288,15	99,91
0,538	766,5	290,08	287,44	100,92
0,529	753,1	285,17	282,41	100,98
0,526	755,8	283,54	283,43	100,04
0,538	778,4	290,08	291,90	99,38
0,531	769,4	286,26	288,53	99,22
0,520	755,6	280,27	283,35	98,91
0,524	763,1	282,45	286,16	98,70
0,537	773,5	289,54	290,06	99,82
0,530	769,4	285,72	288,53	99,03
			Rata-rata	99,69
			SD	0,80
			KV	0,80

LAMPIRAN D
HASIL PENETAPAN KADAR TABLET LIKUISOLID IBUPROFEN

For- mula	Repli- kasi	Absorb- ansi	Csampil (µg/ml)	Cteoritis (µg/ml)	Ka- dar (%)	Rata- rata ± SD	KV
A	I	0,553	298,26	300,11	99,38	100,30	0,82
	II	0,559	301,54	299,96	100,52	±	
	III	0,562	303,17	300,23	100,98	0,82	
B	I	0,553	298,26	300,94	99,11	99,68	0,6
	II	0,556	299,90	301,05	99,62	±	
	III	0,559	301,54	300,60	100,31	0,6	
C	I	0,557	300,44	301,54	99,64	99,72	0,43
	II	0,559	301,54	300,98	100,19	±	
	III	0,554	298,81	300,79	99,34	0,43	
D	I	0,558	300,99	300,53	100,15	99,53	0,56
	II	0,552	297,72	300,45	99,09	±	
	III	0,554	298,81	300,79	99,34	0,56	

LAMPIRAN E
HASIL UJI DISOLUSI TABLET LIKUISOLID IBUPROFEN

FORMULA A

Replikasi	t (menit)	A	C (µg/ml)	Wt (mg)	% Obat Terlepas	AUC (mg menit)
I	10	0,224	118,83	106,9	53,31	534,74
	20	0,249	132,47	119,2	59,43	1130,84
	30	0,275	146,65	132,0	65,79	1256,01
	45	0,330	176,64	159,0	79,25	2182,20
	60	0,347	185,91	167,3	83,41	2447,26
						7551,06
II	10	0,225	119,38	107,4	53,56	537,20
	20	0,251	133,56	120,2	59,92	1138,21
	30	0,278	148,28	133,5	66,53	1268,28
	45	0,329	176,10	158,5	79,01	2189,57
	60	0,349	187,01	168,3	83,90	2450,94
						7584,19
III	10	0,223	118,29	106,5	53,07	532,29
	20	0,247	131,38	118,2	58,94	1123,48
	30	0,279	148,83	133,9	66,77	1260,92
	45	0,325	173,92	156,5	78,03	2178,52
	60	0,343	183,73	165,4	82,43	2414,13
						7509,34

Lanjutan Lampiran E

FORMULA B

Replikasi	t (menit)	A	C (µg/ml)	Wt (mg)	%Obat Terlepas	AUC (mg menit)
I	10	0,359	192,46	173,2	86,72	866,1
	20	0,369	197,91	178,1	89,18	1756,7
	30	0,374	200,64	180,6	90,41	1793,5
	45	0,381	204,46	184,0	92,13	2734,4
	60	0,393	211,00	189,9	95,07	2804,4
						9955,0
II	10	0,365	195,73	176,2	88,19	880,8
	20	0,372	199,55	179,6	89,91	1778,8
	30	0,379	203,37	183,0	91,63	1813,1
	45	0,383	205,55	185,0	92,62	2760,2
	60	0,395	212,09	190,9	95,57	2819,1
						10051,9
III	10	0,362	194,10	174,7	87,46	873,4
	20	0,375	201,19	181,1	90,65	1778,8
	30	0,377	202,28	182,0	91,14	1815,6
	45	0,387	207,73	187,0	93,60	2767,5
	60	0,394	211,55	190,4	95,32	2830,1
						10065,4

Lanjutan Lampiran E

FORMULA C

Replikasi	t (menit)	A	C (µg/ml)	Wt (mg)	% Obat Terlepas	AUC (mg menit)
I	10	0,354	189,73	170,8	85,12	1729,7
	20	0,363	194,64	175,2	87,33	1759,1
	30	0,366	196,28	176,6	88,06	1776,3
	45	0,370	198,46	178,6	89,04	2719,7
	60	0,381	204,46	184,0	91,73	1380,1
						9364,9
II	10	0,356	190,82	171,7	85,61	1732,1
	20	0,362	194,10	174,7	87,08	1759,1
	30	0,367	196,82	177,1	88,30	1773,9
	45	0,368	197,37	177,6	88,55	2708,6
	60	0,380	203,91	183,5	91,49	1376,4
						9350,1
III	10	0,358	191,91	172,7	86,10	1729,7
	20	0,359	192,46	173,2	86,35	1756,7
	30	0,369	197,91	178,1	88,79	1786,1
	45	0,371	199,00	179,1	89,28	2716,0
	60	0,379	203,37	183,0	91,24	1372,7
						9361,2

Lanjutan Lampiran E

FORMULA D

Replikasi	t (menit)	A	C (µg/ml)	Wt (mg)	% Obat Terlepas	AUC (mg menit)
I	10	0,309	165,19	148,7	74,11	1584,9
	20	0,349	187,01	168,3	83,90	1688,0
	30	0,351	188,10	169,3	84,39	1697,8
	45	0,353	189,19	170,3	84,88	2568,7
	60	0,357	191,37	172,2	85,86	1291,7
						8831,1
II	10	0,312	166,83	150,1	74,85	1562,8
	20	0,337	180,46	162,4	80,96	1648,7
	30	0,347	185,91	167,3	83,41	1683,0
	45	0,351	188,10	169,3	84,39	2557,7
	60	0,356	190,82	171,7	85,61	1288,1
						8740,3
III	10	0,310	165,74	149,2	74,36	1560,3
	20	0,338	181,01	162,9	81,21	1653,6
	30	0,348	186,46	167,8	83,66	1688,0
	45	0,352	188,64	169,8	84,63	2572,4
	60	0,359	192,46	173,2	86,35	1299,1
						8773,4

LAMPIRAN F
CONTOH PERHITUNGAN

Contoh perhitungan indeks kompresibilitas dan Hausner ratio:

Formula A :

Berat gelas = 111,29 g (W1)

Berat gelas + granul = 148,3 g (W2)

V1 = 100 ml

V2 = 84 ml

$$Bj \text{ nyata} = \frac{(W_2 - W_1)}{V_1} = \frac{(148,3 - 111,29)}{100} = 0,3701$$

$$Bj \text{ mampat} = \frac{(W_2 - W_1)}{V_2} = \frac{(148,3 - 111,29)}{84} = 0,4460$$

$$\% \text{ kompresibilitas} = \left(1 - \frac{Bj.nyata}{Bj.mampat} \right) \times 100\% = 16\%$$

Formula A:

$$HR = \frac{Bj.mampat}{Bj.nyata} = 1,19$$

Contoh perhitungan akurasi & presisi:

%	Bahan Aktif (mg)	Matriks (mg)	Dapar Fosfat 0,2M pH7,2 Ad	Pipet	Dapar Fosfat 0,2M pH7,2 Ad	Konsentrasi (ppm)
100	200	600	100	1,5	10	300

Absorbansi = 0,558 → y = 0,0018x + 0,0061

Konsentrasi sebenarnya = 300,99 ppm

Konsentrasi teoritis = 300,45 ppm

Lanjutan Lampiran F

$$\begin{aligned}\% \text{ perolehan kembali} &= (\text{konsentrasi sebenarnya} / \text{konsentrasi teoritis}) \times 100\% \\ &= (300,99 / 300,45) \times 100\% \\ &= 100,18\%\end{aligned}$$

$$\begin{aligned}\text{Untuk menghitung \% KV} &= \frac{SD}{\bar{X}} \times 100\% \\ &= \frac{1,01}{99,83} \times 100\% \\ &= 1,01 \%\end{aligned}$$

Contoh perhitungan % obat terlepas:

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

Formula A replikasi 1 pada t = 10 menit

$$\% \text{ obat terlepas} = \frac{106,9}{\frac{100,30}{100} \times 200} \times 100\% = 53,31\%$$

Contoh perhitungan AUC pada disolusi:

Rumus:

Formula A replikasi 1

$$W_{tn-1} = 106,9$$

$$W_{tn} = 119,2$$

$$t_n = 20 \text{ menit}$$

$$t_{n-1} = 10 \text{ menit}$$

$$\begin{aligned}AUC &= \frac{1006,9 + 119,2}{2} \times (20 - 10) \\ &= 534,74\end{aligned}$$

Lanjutan Lampiran F

$$\begin{aligned}\text{Luas } \square &= 60 \times \text{penetapan kadar} \times \text{dosis} \\ &= 60 \times 100,30\% \times 200 \text{ mg} \\ &= 12035,6\end{aligned}$$

$$\begin{aligned}\% \text{ ED Formula A replikasi 1} &= (\sum \text{AUC} / \text{luas } \square) \times 100\% \\ &= (7551,06/12035,6) \times 100\% \\ &= 62,74 \%\end{aligned}$$

LAMPIRAN G
HASIL UJI KURVA BAKU

REPLIKASI I

KONSENTRASI	ABSORBANSI	X²	Y²	XY
75,45	0,129	5692,703	0,0166	9,7330
100,6	0,178	10120,36	0,0317	17,9068
201,2	0,359	40481,44	0,1289	72,2308
301,8	0,563	91083,24	0,3170	169,9134
402,4	0,728	161925,8	0,5300	292,9472
503	0,928	253009	0,8612	466,784

REPLIKASI II

KONSENTRASI	ABSORBANSI	X²	Y²	XY
75,38	0,144	5682,144	0,0207	10,8547
100,5	0,184	10100,25	0,0338	18,492
201	0,378	40401	0,1429	75,978
301,5	0,568	90902,25	0,3226	171,252
402	0,742	161604	0,5506	298,284
502,5	0,923	252506,3	0,8519	463,8075

REPLIKASI III

KONSENTRASI	ABSORBANSI	X²	Y²	XY
75,3	0,169	5670,09	0,0286	12,7257
100,4	0,211	10080,16	0,0445	21,1844
200,8	0,386	40320,64	0,1490	77,5088
301,2	0,571	90721,44	0,3260	171,9852
401,6	0,747	161282,6	0,5580	299,9952
502	0,91	252004	0,8281	456,82

Lanjutan Lampiran G

	ΣX^2	ΣXY	ΣY^2	N	Residual SS	RDF
Replikasi I	562312,5	1029,5153	1,8853	6	$4,45 \cdot 10^{-4}$	3
Replikasi II	561195,9	1038,6682	1,9226	6	$2,13 \cdot 10^{-4}$	3
Replikasi III	560078,9	1040,2193	1,9342	6	$2,266 \cdot 10^{-3}$	3
Pooled regression					$2,91 \cdot 10^{-3}$	9
Common regression	1683587	3108,4028	5,7422		$3,13 \cdot 10^{-3}$	11

F hitung < F tabel $_{0,05 (3,9)} = 0,3287 < 3,86$

Karena F hitung lebih kecil dari F tabel maka tidak ada perbedaan bermakna antarpersamaan regresi.

LAMPIRAN H
HASIL UJI STATISTIK KEKERASAN TABLET LIKUISOLID
IBUPROFEN ANTARFORMULA

Oneway

Descriptives

Kekerasan								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Formula A	3		
Formula B	3	7,5733	,26312	,15191	6,9197	8,2270	7,29	7,81
Formula C	3	7,4167	,17559	,10138	6,9805	7,8529	7,25	7,60
Formula D	3	7,4500	,26851	,15503	6,7830	8,1170	7,16	7,69
Total	12	7,4325	,65379	,18873	7,0171	7,8479	5,61	8,16

Test of Homogeneity of Variances

Kekerasan			
Levene Statistic	df1	df2	Sig.
9,884	3	8	,005

ANOVA

Kekerasan					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,122	3	,041	,071	,974
Within Groups	4,580	8	,572		
Total	4,702	11			

Karena $F_{hitung} < F_{tabel_{0,05}(3,8)} = 0,071 < 4,07$; maka H_0 diterima dan tidak ada perbedaan bermakna antarformula.

LAMPIRAN I
HASIL UJI STATISTIK KERAPUHAN TABLET LIKUISOLID
IBUPROFEN ANTARFORMULA

Oneway

Descriptives

Kerapuhan								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Formula A	3		
Formula B	3	,1233	,06506	,03756	-,0383	,2850	,06	,19
Formula C	3	,1633	,07506	,04333	-,0231	,3498	,12	,25
Formula D	3	,1000	,03464	,02000	,0139	,1861	,06	,12
Total	12	,2067	,15251	,04403	,1098	,3036	,06	,51

Test of Homogeneity of Variances

Kerapuhan			
Levene Statistic	df1	df2	Sig.
,543	3	8	,666

ANOVA

Kerapuhan					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	,224	3	,075	18,700	,001
Within Groups	,032	8	,004		
Total	,256	11			

Karena $F_{hitung} > F_{tabel_{0,05(3,8)}} = 18,700 > 4,07$; maka H_0 ditolak dan ada perbedaan bermakna antarformula.

Lanjutan Lampiran I

Post Hoc Tests

Multiple Comparisons

Kerapuhan

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula A	Formula B	,31667(*)	,05159	,000	,1977	,4356
	Formula C	,27667(*)	,05159	,001	,1577	,3956
	Formula D	,34000(*)	,05159	,000	,2210	,4590
Formula B	Formula A	-,31667(*)	,05159	,000	-,4356	-,1977
	Formula C	-,04000	,05159	,460	-,1590	,0790
	Formula D	,02333	,05159	,663	-,0956	,1423
Formula C	Formula A	-,27667(*)	,05159	,001	-,3956	-,1577
	Formula B	,04000	,05159	,460	-,0790	,1590
	Formula D	,06333	,05159	,254	-,0556	,1823
Formula D	Formula A	-,34000(*)	,05159	,000	-,4590	-,2210
	Formula B	-,02333	,05159	,663	-,1423	,0956
	Formula C	-,06333	,05159	,254	-,1823	,0556

* The mean difference is significant at the 0.05 level.

LAMPIRAN J
HASIL UJI STATISTIK WAKTU HANCUR TABLET LIKUISOLID
IBUPROFEN ANTARFORMULA

Oneway

Descriptives

Waktu Hancur

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Formula A	3		
Formula B	3	1,3033	,11240	,06489	1,0241	1,5825	1,18	1,40
Formula C	3	1,4067	,10066	,05812	1,1566	1,6567	1,30	1,50
Formula D	3	1,5133	,09018	,05207	1,2893	1,7374	1,42	1,60
Total	12	1,4258	,15664	,04522	1,3263	1,5254	1,18	1,77

Test of Homogeneity of Variances

Waktu Hancur

Levene Statistic	df1	df2	Sig.
2,749	3	8	,112

ANOVA

Waktu Hancur

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,078	3	,026	1,082	,410
Within Groups	,192	8	,024		
Total	,270	11			

Karena $F_{hitung} < F_{tabel_{0,05(3,8)}} = 1,08 < 4,07$; maka H_0 diterima dan tidak ada perbedaan bermakna antarformula.

LAMPIRAN K
HASIL UJI STATISTIK KADARTABLET LIKUISOLID
IBUPROFEN ANTARFORMULA

Oneway

Descriptives

Penetapan Kadar

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula A	3	100,2933	,82373	,47558	98,2471	102,3396	99,38	100,98
Formula B	3	99,6800	,60225	,34771	98,1839	101,1761	99,11	100,31
Formula C	3	99,7233	,43108	,24889	98,6525	100,7942	99,34	100,19
Formula D	3	99,5267	,55411	,31991	98,1502	100,9031	99,09	100,15
Total	12	99,8058	,60924	,17587	99,4187	100,1929	99,09	100,98

Test of Homogeneity of Variances

Penetapan Kadar

	Levene Statistic	df1	df2	Sig.
	,597	3	8	,635

ANOVA

Penetapan Kadar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,015	3	,338	,882	,490
Within Groups	3,068	8	,384		
Total	4,083	11			

Karena $F_{hitung} < F_{tabel_{0,05(3,8)}} = 0,882 < 4,07$; maka H_0 diterima dan tidak ada perbedaan yang bermakna antarformula.

LAMPIRAN L

HASIL UJI STATISTIK DISOLUSI BERDASARKAN %ED₆₀
 TABLET LIKUISOLID IBUPROFEN ANTARFORMULA

Oneway

Descriptives

ED	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Formula A	3		
Formula B	3	85,1833	1,89466	1,09388	80,4767	89,8899	84,03	87,37
Formula C	3	78,2100	,06245	,03606	78,0549	78,3651	78,14	78,26
Formula D	3	73,5267	,38436	,22191	72,5719	74,4815	73,18	73,94
Total	12	74,9083	8,57580	2,47562	69,4595	80,3571	62,39	87,37

Test of Homogeneity of Variances

ED	Levene Statistic	df1	df2	Sig.
	10,824	3	8	,003

ANOVA

ED	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	801,311	3	267,104	278,378	,000
Within Groups	7,676	8	,960		
Total	808,987	11			

Karena F hitung > F tabel_{0,05 (3,8)} = 278,378 > 4,07; maka H₀ ditolak dan ada perbedaan bermakna antar formula.

Lampiran L

Post Hoc Tests

Multiple Comparisons

ED
LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	Formula B	-22,47000(*)	,79979	,000	-24,3143	-20,6257
Formula A	Formula C	-15,49667(*)	,79979	,000	-17,3410	-13,6523
	Formula D	-10,81333(*)	,79979	,000	-12,6577	-8,9690
	Formula A	22,47000(*)	,79979	,000	20,6257	24,3143
Formula B	Formula C	6,97333(*)	,79979	,000	5,1290	8,8177
	Formula D	11,65667(*)	,79979	,000	9,8123	13,5010
	Formula A	15,49667(*)	,79979	,000	13,6523	17,3410
Formula C	Formula B	-6,97333(*)	,79979	,000	-8,8177	-5,1290
	Formula D	4,68333(*)	,79979	,000	2,8390	6,5277
	Formula A	10,81333(*)	,79979	,000	8,9690	12,6577
Formula D	Formula B	-11,65667(*)	,79979	,000	-13,5010	-9,8123
	Formula C	-4,68333(*)	,79979	,000	-6,5277	-2,8390

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

LAMPIRAN M
HASIL UJI STATISTIK KONSTANTA LAJU DISOLUSI TABLET
LIKUISOLID IBUPROFEN ANTARFORMULA

Oneway

Descriptives

Laju Disolusi

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Formula A	3		
Formula B	3	,0700	,00615	,00355	,0547	,0853	,07	,08
Formula C	3	,0687	,00459	,00265	,0573	,0801	,07	,07
Formula D	3	,0605	,00497	,00287	,0482	,0729	,06	,06
Total	12	,0634	,00775	,00224	,0585	,0683	,05	,08

Test of

Homogeneity of Variances

Laju Disolusi

Levene Statistic	df1	df2	Sig.
1,702	3	8	,243

ANOVA

Laju Disolusi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,000	3	,000	7,321	,011
Within Groups	,000	8	,000		
Total	,001	11			

Karena $F_{hitung} > F_{tabel_{0,05(3,8)}} = 7,321 > 4,07$; maka H_0 ditolak dan ada perbedaan bermakna antar formula.

Lanjutan Lampiran M

Post Hoc Tests

Multiple Comparisons

Laju Disolusi

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula A	Formula B	-,01563(*)	,00383	,004	-,0245	-,0068
	Formula C	-,01433(*)	,00383	,006	-,0232	-,0055
	Formula D	-,00617	,00383	,146	-,0150	,0027
Formula B	Formula A	,01563(*)	,00383	,004	,0068	,0245
	Formula C	,00130	,00383	,743	-,0075	,0101
	Formula D	,00947(*)	,00383	,039	,0006	,0183
Formula C	Formula A	,01433(*)	,00383	,006	,0055	,0232
	Formula B	-,00130	,00383	,743	-,0101	,0075
	Formula D	,00817	,00383	,066	-,0007	,0170
Formula D	Formula A	,00617	,00383	,146	-,0027	,0150
	Formula B	-,00947(*)	,00383	,039	-,0183	-,0006
	Formula C	-,00817	,00383	,066	-,0170	,0007

* The mean difference is significant at the 0.05 level.

LAMPIRAN N
SERTIFIKAT ANALISIS IBUPROFEN



Shasun Chemicals And Drugs Ltd.

IBUPROFEN BP/Ph.Eur. (SN Grade)			
CERTIFICATE OF ANALYSIS			
Nature of Packing : Sea Worthy Fibre Drum		Analytical Report No. : FPIBU0607674	
Sample Taken By : S.Sivakumar		Batch Number : IBU0607674	
Date of Manufacture : July 2006		Date of Analysis : 25-07-2006	
Expiry Date : June 2011		Date of Report : 25-07-2006	
Batch Volume(Qty) : 3000 Kg.		Manufactured by : Shasun Chemicals And Drugs Limited, Pondicherry.	
S.No	TESTS	RESULTS	LIMITS
1.	Appearance	White crystalline powder	White, crystalline powder or colourless crystals
2.	Solubility	Complies	Freely soluble in acetone, in methanol and in metizylene chloride. Dissolves in dilute solutions of alkali hydroxides and carbonates. Practically insoluble in water.
3.	Clarity and colour of solution	Complies	10 % w/v solution (5g in 50 ml. of the solution) in methanol should be clear and colourless
4.	Identification		
	a) By IR	Conforms	The IR spectrum of sample should be concordant with the spectrum of Ibuprofen RS
	b) By UV	1.24 1.03	The ratio of absorbance at the max. at 264 nm to that at 258 nm is 1.20 to 1.30 The ratio of absorbance at the max at 272 nm to that at 258 nm is 1.00 to 1.10
	c) By TLC	Complies	Principal spot should be similar in position, colour and size compared to Ibuprofen RS
	d) Melting point	76.1 °C	75.0°C to 78.0 °C
5.	Optical rotation	0.90 °	- 0.05° to +0.05°
6.	Heavy metals	L.T. 10 PPM	NMT 10 PPM
7.	Related substances (by HPLC)		
	a) 2-(4-Isobutyl) Phenyl Propanoic Acid (Impurity J)	0.06 % (Area %)	NMT 0.20 % (Area %)
	b) 2-(4-Butyl phenyl)propanoic acid (Impurity B)	Not Detected	NMT 0.30 % (w/w)
	c) 4-Isobutyroacetophenone (Impurity E)	Not Detected	NMT 0.30 % (Area %)
	d) Any unidentified impurity	0.04 % (Area %)	NMT 0.10 % (Area %)
	e) Total impurities (Apart from impurity B)	0.14 % (Area %)	NMT 0.50 % (Area %)
8.	Sulphated ash	0.04 % (w/w)	NMT 0.10 % (w/w)
9.	Loss on drying	0.10 % (w/w)	NMT 0.50 % (w/w)
10.	Assay (dry basis)	99.8 % (w/w)	98.5 % - 101.0 % (w/w)

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



Shasun Chemicals And Drugs Ltd.

IBUPROFEN BP/Ph.Eur. (SN Grade) CERTIFICATE OF ANALYSIS			
Nature of Packing : Sea Worthy Fibre Drum		Analytical Report No. : FPBU0607674	
Sample Taken By : S.Sivakumar		Batch Number : IBU0607674	
Date of Manufacture : July 2006		Date of Analysis : 25-07-2006	
Expiry Date : June 2011		Date of Report : 25-07-2006	
Batch Volume(Qty) : 3000 Kg.		Manufactured By : Shasun Chemicals And Drugs Limited, Pondicherry.	
S.No	TESTS	RESULTS	LIMITS
ADDITIONAL TESTS			
a.	Bulk Density		
	Untapped	0.45 g/mL	0.35- 0.55 g/mL
	Tapped(1250 tappings)	0.64 g/mL	0.50- 0.75 g/mL
b.	Mean Particle Size	76.4 microns	60.0 - 130.0 microns
c.	Residual solvents		
	i) Acetone	17 PPM	NMT 100 PPM
	ii) Isopropyl alcohol	LT 0.89 PPM	NMT 250 PPM
	iii) Hexanes	29 PPM	NMT 290 PPM
	iv) Tri chloro ethylene	LT 0.19 PPM	NMT 80 PPM
v) Methanol ϕ	Not Detected	NMT 500 PPM	
OPINION: The Material Complies As Per BP/Ph.Eur. Standard.			
Note : NMT = Not more than NLT = Not less than LT = Less than			
ϕ NOT USED IN THE PROCESS, TEST INCLUDED FOR COMPLIANCE WITH CERTIFICATE OF SUITABILITY.			
Compiled by : <i>ES</i> Date : 25/07/2006 (E.Senthikumar) Senior Chemist		Reviewed by : <i>SR</i> Date : 25/07/2006 (S.Rajasudalaiannathu) Senior Chemist	
		Approved by: <i>[Signature]</i> Date : 25/07/2006 (N.Vinayagaperumal) Dy.QC-Incharge	
SCQC/F-024/F/06			

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

LAMPIRAN O
SERTIFIKAT ANALISIS AVICEL PH 102

AsahiKASEI
ASAHI KASEI CHEMICALS

Date: 08-APR-2011
Issued by manufacturer

1-105 Kanda Jinbocho, Chiyoda-ku, TOKYO 101-8101, JAPAN
TEL +81-(0)3-3296-3361 FAX +81-(0)3-3296-3467
Manufacturing site: 304, Mizushiri-machi, Nobeoka-city, Miyazaki 882-0015, Japan

1511 / 25b / v1111

YOUR NO.: C9HE-11-5298-0012

CERTIFICATE OF ANALYSIS

Compendial name: Microcrystalline Cellulose, NF, Ph. Eur., JP

Trade name : CEOLUS®

Grade : PH-102 **Lot No. 2122 (200 bags)**

Manufacturing Date: 05-FEB-2011

Re-evaluation Date: 05-FEB-2014

Organic Solvent: not used in our process


Compendial Standards	Specifications	Lot Analysis
Description	Passes	Passes
Identification	Passes	Passes
Degree of polymerization	100 - 300	Passes
Loss on drying (%)	2.0 - 5.0	3.5
Water-soluble substances (mg)	NMT 12.5	4.6
Ether-soluble substances (mg)	NMT 5.0	0.1
Conductivity (μ S/cm)	NMT 75	29
Heavy metals (ppm)	NMT 10	NMT 10
Solubility	Passes	Passes
Residue on ignition (%)	NMT 0.1	0.00
Bulk density (g/cm ³)	0.28 - 0.33	0.316
	5.0 - 7.5	6.2
Total aerobic microbial count (cfu/g)	NMT 1000	Passes
Total combined molds and yeasts count (cfu/g)	NMT 100	Passes
<i>Escherichia coli</i>	None Present	None Present
<i>Salmonella</i> species	None Present	None Present
<i>Pseudomonas Aeruginosa</i>	None Present	None Present
<i>Staphylococcus Aureus</i>	None Present	None Present

ASAHI Standards		
Particle size, wt. % >250 μ m (60 mesh)	LT 8.0	0.5
Particle size, wt. % >150 μ m (100 mesh)	20 - 40	28

NMT -Not More Than; LT -Less Than
We certify that the product complies with the standards of the NF, Ph. Eur., JP.

Storage conditions: Store at ambient conditions. Keep containers sealed; material is hygroscopic.

Re-evaluation Date: Three years after manufacturing, if stored as recommended.
Asahi Kasei Chemicals recommends that the customer's quality control unit may re-evaluate the quality of this material at the given time e.g. for loss on drying and extend the shelf life of this lot on its own responsibility.


Shuji ONISHI
Manager
Quality Assurance Division


M. T. FARIS
KUALA LUMPUR

LAMPIRAN P
SERTIFIKAT ANALISIS HPMC K4M


货物运输条件鉴定书
Certification for Safe Transport of Chemical Goods NO. 2010010879

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样品名称 Name of Goods	中文 Chinese	羟丙甲纤维素; 美多秀
	英文 English	METHOCEL(Hypromellose)
送检单位 Shipper	上海卡乐康包衣技术有限公司	
生产单位 Manufacturer	DOW CHEMICAL	
检查方法、程序 Inspection Methods and Procedures	联合国《关于危险货物运输的建议书》 UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"	
样品外观与性状 Appearance & Odor	白色粉末, 无臭 white powder, odorless	
TRANSPORT 鉴定 结果 INFORMATION	<p>1. 危险性识别 (Hazards identification)</p> <p>无。 None.</p> <p>2. 空运按照IATA DGR办理的类项 (Suggestion according to IATA DGR)</p> <p>可按普通货物条件办理。 The substance is not subject to IATA DGR.</p> <p>3. 包装要求 (Packaging requirements)</p> <p>可按普通货物条件办理。 The goods are packaged according to the packaging requirement of ordinary goods.</p> <p>检查日期: 2009年12月15日至 2009年12月15日 生效日期: 2010年01月01日</p>	
备注 Comment	无。 None.	

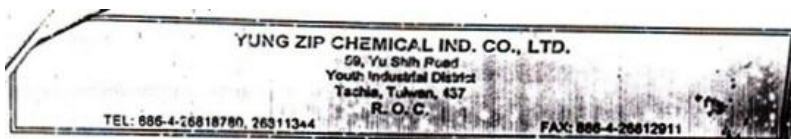
批准: 
Approver:

审核: 
Checker:

主检: 
Appraiser:



LAMPIRAN Q
SERTIFIKAT ANALISIS SODIUM STARCH GLYCOLATE



CERTIFICATE OF ANALYSIS

D S T
 (Sodium Starch Glycolate)

Lot No.: SSGA02121

Mfg. Date: Nov. 29, 2007

Analysis Following USP 30-NF 25

Exp. Date: Nov. 28, 2010

ITEMS	SPECIFICATIONS	RESULTS
Description	A white, tasteless, odorless, relatively free-flowing powder.	Confirmed
Identification	USP 30/NF 25	Confirmed
Microbial limits	Salmonella E. Coli	Negative Negative
pH	Between 5.5 and 7.5	6.1
Loss on drying	Not more than 10.0 %	2.5 %
Iron	Not more than 0.002 %	Passed
Heavy metals	Not more than 0.002 %	Passed
Sodium chloride	Not more than 7.0 %	4.0 %
Sodium glycolate	Not more than 2.0 %	1.8 %
Assay	Sodium (Na) (2.8% to 4.2%)	3.2 %

Conclusion : Passed

Chien-Sheng Tseng
 Chien-Sheng Tseng
 Director Quality Assurance

Date
 12/28/2007/40053

LAMPIRAN R

SERTIFIKAT ANALISIS MAGNESIUM STEARAT



Partner der Industrie

QUALITÄTSMANAGEMENT

CERTIFICATE OF ANALYSIS

customer: PT BRATACO
 contact person:
 FAX:
 your order-number: PTB0735V1104 our order-number: 4011746
 delivered on: 04.08.2004 quantity: 9000
 brand: LIGA MAGNESIUM STEARATE MF-2-V VEGETABLE charge-no. C447176
 manufacturing date: 2004-07-19 expiry date: 2006-07-19

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

parameter	unit	method	result
identification A	°C	Ph.Eur	59
identification A	metal reaction	USP/NF	passes test
identification B	retention time GC	USP/NF	retentions match
identity	ml 0,01N HCl	Ph.Eur	<0,5
acidity	ml 0.01 N NaOH	Ph.Eur	<0,5
heavy metals as Pb	ppm	JP	<20
lead	ppm	BAE 300-B	<1
cadmium	ppm	BAE 300-B	<1
nickel	ppm	BAE 300-B	<1
chloride	%	Ph.Eur	<0,1
sulfate	%	Ph.Eur	<0,5
acid value of the fatty acid	mg KOH/g	Ph.Eur	204,8
relative content of stearic acid	%	USP/NF	65,1
rel. cont. of stearic and palmitic acid	%	USP/NF	98,9
total aerobic microbial count	cfu/g	USP/NF	<10
Molds & Yeasts	cfu/g	USP/NF	105
Escherichia coli	cfu/g	USP/NF	absent
Staphylococcus Species	cfu/g	USP/NF	absent
organic volatile impurities		USP/NF	meets USP/NF
loss on drying	%	BAE 600	3,9
magnesium content	%	BAE 200 c	4,7
free fatty acid	%	BAE 400	0,6
inorganic residue at 200 mesh	%	BAE 605	0,2
bulk density tapped	g/ml	BAE 611a	0,32
specific surface area BET	qm/g	USP/NF	10,0
contamination		BAE 601	In accordance

Venlo, 27.08.04

data of the above mentioned delivery are based upon careful test according to the guidelines of our quality assurance system. They do not release the customer from entry control. Besides we do not guarantee special properties for concrete applications.
 This certificate was issued by EDV and does not bear a signature.



BRATACO
 BRATACO
 BRATACO

LAMPIRAN S
TABEL UJI F

TABEL DISTRIBUSI F UNTUK 5% DAN 1%

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

$V_2 = dk$ penyebut	$V_1 = dk$ pembilang																									
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞		
1	161 4052	200 4999	216 5403	225 5625	230 5764	234 5859	237 5928	239 5961	241 6022	242 6056	243 6082	244 6106	245 6142	246 6169	248 6208	249 6234	250 6258	251 6286	252 6302	253 6323	253 6334	254 6352	254 6361	254 6366		
2	18,51 98,49	19,00 99,01	19,16 99,17	19,25 99,25	19,30 99,30	19,33 99,33	19,36 99,34	19,37 99,36	19,38 97,38	19,39 99,40	19,40 99,41	19,41 99,42	19,42 99,43	19,43 99,44	19,44 99,45	19,45 99,46	19,46 99,47	19,47 99,48	19,47 99,48	19,48 99,49	19,49 99,49	19,49 99,50	19,50 99,50	19,50 99,50		
3	10,13 34,12	9,55 30,81	9,28 29,46	9,12 28,71	9,01 28,24	8,94 27,91	8,88 27,67	8,84 27,49	8,81 27,34	8,78 27,23	8,76 27,13	8,74 27,05	8,71 26,92	8,69 26,83	8,66 26,69	8,64 26,60	8,62 26,50	8,60 26,41	8,58 26,30	8,57 26,27	8,56 26,23	8,54 26,18	8,54 26,14	8,53 26,12		
4	7,71 21,20	6,94 18,00	6,59 16,69	6,39 15,98	6,26 15,52	6,16 15,21	6,09 14,98	6,04 14,80	6,00 14,66	5,96 14,54	5,93 14,45	5,91 14,37	5,87 14,24	5,84 14,15	5,80 14,02	5,77 13,93	5,74 13,83	5,71 13,74	5,70 13,69	5,68 13,61	5,66 13,57	5,65 13,52	5,64 13,48	5,53 13,46		
5	6,61 16,26	5,79 13,27	5,41 12,06	5,19 11,39	5,05 10,97	4,95 10,67	4,88 10,45	4,82 10,27	4,78 10,15	4,74 10,05	4,70 9,96	4,68 9,89	4,64 9,77	4,60 9,68	4,56 9,55	4,53 9,47	4,50 9,38	4,46 9,29	4,44 9,24	4,42 9,17	4,40 9,13	4,38 9,07	4,37 9,04	4,36 9,02		
6	5,99 13,74	5,14 10,92	4,76 9,78	4,53 9,15	4,39 8,75	4,28 8,47	4,21 8,26	4,15 8,10	4,10 7,98	4,06 7,87	4,03 7,79	4,00 7,72	3,96 7,60	3,92 7,52	3,87 7,39	3,84 7,31	3,81 7,23	3,77 7,14	3,75 7,09	3,72 7,02	3,71 6,99	3,69 6,94	3,68 6,90	3,67 6,88		
7	5,59 12,25	4,74 9,55	4,35 8,45	4,12 7,85	3,97 7,46	3,87 7,19	3,79 7,00	3,73 6,84	3,68 6,71	3,63 6,62	3,60 6,54	3,57 6,47	3,52 6,35	3,49 6,27	3,44 6,15	3,41 6,07	3,38 5,98	3,34 5,90	3,32 5,85	3,29 5,78	3,28 5,75	3,25 5,70	3,24 5,67	3,23 5,65		
8	5,32 11,26	4,46 8,65	4,07 7,59	3,84 7,01	3,69 6,63	3,58 6,37	3,50 6,19	3,44 6,03	3,39 5,91	3,34 5,82	3,31 5,74	3,28 5,67	3,23 5,56	3,20 5,48	3,15 5,36	3,12 5,28	3,08 5,20	3,05 5,11	3,03 5,06	3,00 5,00	2,98 4,96	2,96 4,91	2,94 4,88	2,93 4,86		
9	5,12 10,56	4,26 8,02	3,86 6,99	3,63 6,42	3,48 6,06	3,37 5,80	3,29 5,62	3,23 5,47	3,18 5,35	3,13 5,26	3,10 5,18	3,07 5,11	3,02 5,00	2,98 4,92	2,93 4,80	2,90 4,73	2,86 4,61	2,82 4,56	2,80 4,51	2,77 4,45	2,76 4,41	2,73 4,36	2,72 4,33	2,71 4,34		

Lanjutan Lampiran S

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

Dikutip dari : Scheffler (1987).

LAMPIRAN T
TABEL UJI R

DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT	DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT
1	.997	.1000	24	.388	.496
2	.950	.990	25	.381	.487
3	.878	.959	26	.374	.478
4	.811	.917	27	.367	.470
5	.754	.874	28	.361	.463
6	.707	.834	29	.355	.456
7	.666	.798	30	.349	.449
8	.632	.765	35	.325	.418
9	.602	.735	40	.304	.393
10	.576	.708	48	.288	.372
11	.553	.684	50	.273	.354
12	.532	.661	60	.250	.325
13	.514	.641	70	.232	.302
14	.497	.623	80	.217	.283
15	.482	.606	90	.205	.267
16	.468	.590	100	.195	.254
17	.456	.575	125	.174	.228
18	.444	.561	150	.159	.208
19	.433	.549	200	.138	.181
20	.423	.537	300	.113	.148
21	.413	.526	400	.098	.128
22	.404	.515	500	.088	.115
23	.396	.505	1000	.062	.081

Dikutip dari : Soedigdo & Soedigdo (1977).