

LAMPIRAN A
PERHITUNGAN STATISTIK ANTAR PERSAMAAN REGRESI

Data kurva baku Terbutalin sulfat dalam larutan dapar fosfat pH 6,8
pengujian 1

Konsentrasi ($\mu\text{g/mL}$)	Serapan (A)	X^2	Y^2	XY
1	0,005	1	0,000025	0,005
3	0,018	9	0,000324	0,054
5	0,061	25	0,003721	0,305
10	0,094	100	0,008836	0,94
20	0,18	400	0,0324	3,6
30	0,246	900	0,060516	7,38
40	0,307	1600	0,094249	12,28
50	0,362	2500	0,131044	18,1
60	0,443	3600	0,196249	26,58
70	0,551	4900	0,303601	38,57
90	0,660	8100	0,4356	59,4
		$\Sigma = 22135$	$\Sigma = 1,2665$	$\Sigma = 167,214$

Data kurva baku Terbutalin sulfat dalam larutan dapar fosfat pH 6,8
pengujian 2

Konsentrasi ($\mu\text{g/mL}$)	Serapan (A)	X^2	Y^2	XY
1,004	0,003	1,008016	0,000009	0,003012
3,012	0,021	9,072144	0,000441	0,063252
5,02	0,071	25,2004	0,005041	0,35642
10,04	0,09	100,8016	0,0081	0,9036
20,08	0,151	403,2064	0,022801	3,03208
30,12	0,23	907,2144	0,0529	6,9276
40,16	0,297	1612,826	0,088209	11,92752
50,2	0,35	2520,04	0,1225	17,57
60,24	0,453	3628,858	0,205209	27,28872
70,28	0,52	4939,278	0,2704	36,5456
90,36	0,641	8164,93	0,410881	57,92076
		$\Sigma =$ 22312,43	$\Sigma =$ 1,186491	$\Sigma = 167,214$

Data kurva baku Terbutalin sulfat dalam larutan dapar fosfat pH 6,8
pengujian 3

Konsentrasi ($\mu\text{g/mL}$)	Serapan (A)	X^2	Y^2	XY
1,008	0,007	1,016064	0,000049	0,007056
3,024	0,02	9,144576	0,000625	0,0756
5,04	0,051	25,4016	0,002601	0,25704
10,08	0,087	101,6064	0,007569	0,87696
20,16	0,158	406,4256	0,024964	3,18528
30,24	0,241	914,4576	0,058081	7,28784
40,32	0,283	1625,702	0,080089	11,41056
50,4	0,367	2540,16	0,134689	18,4968
60,48	0,476	3657,83	0,226576	28,78848
70,56	0,543	4978,714	0,294849	38,31408
90,72	0,647	8230,118	0,418609	58,69584
		$\Sigma =$ 22490,58	$\Sigma =$ 1,248701	$\Sigma =$ 167,3955

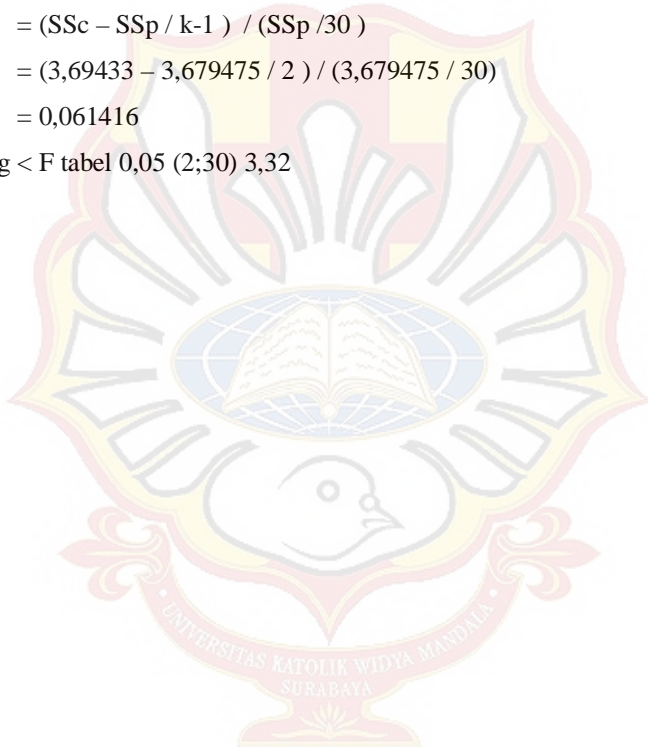
	ΣX^2	ΣY^2	ΣXY	N	SSi	RDF
Reg. I	22135	1,266565	167,214	11	1,259011	10
Reg. II	22312,43	1,186491	167,214	11		10
Reg. III	22490,58	1,248701	167,3955	11	1,179206	10
					1,241258	
	66938,01	3,701757	497,1481		3,679475	30

$$\begin{aligned} SSc &= \sum Y^2c - [\sum XYc / \sum X^2c] \\ &= 3,701757 - [497,1481 / 66938,01] \\ &= 3,69433 \end{aligned}$$

$$\begin{aligned} SSp &= SSi \ 1 + SSi \ 2 + SSi \ 3 \\ &= 1,259011 + 1,179206 + 1,241258 \\ &= 3,679475 \end{aligned}$$

$$\begin{aligned} F &= (SSc - SSp / k-1) / (SSp / 30) \\ &= (3,69433 - 3,679475 / 2) / (3,679475 / 30) \\ &= 0,061416 \end{aligned}$$

F hitung < F tabel 0,05 (2;30) 3,32



LAMPIRAN B
PERHITUNGAN AKURASI DAN PRESISI

C (µg/mL)	Uji	Serapan	Kadar Teoritis	Kadar Teramati	% Perolehan kembali
80%	1	0,296	40,1	39,359	98,152
	2	0,298	40,3	39,633	98,346
	3	0,304	40,2	40,457	100,639
				Rata – rata	99,046
				SD	1,38
				KV	1,40
C (µg/mL)	Uji	Serapan	Kadar Teoritis	Kadar Teramati	% Perolehan kembali
100 %	1	0,378	50,3	50,643	100,622
	2	0,381	50,6	51,025	100,839
	3	0,374	50,5	50,064	99,136
				Rata – rata	100,199
				SD	0,93
				KV	0,92
C (µg/mL)	Uji	Serapan	Kadar Teoritis	Kadar Teramati	% Perolehan kembali
120%	1	0,448	40,1	60,220	99,702
	2	0,451	40,3	60,632	100,550
	3	0,458	40,2	61,592	101,470
				Rata – rata	100,574
				SD	0,88
				KV	0,88

LAMPIRAN C
DATA UJI PRESISI

C (µg/mL)	Uji	Serapan	Kadar Teoritis	Kadar Teramati	% Perolehan kembali
100 %	1	0,378	50,3	50,643	100,622
	2	0,381	50,6	51,025	100,839
	3	0,384	50,1	51,436	102,667
	4	0,371	50,2	49,652	98,909
	5	0,370	50,4	49,515	98,244
	6	0,374	50,5	50,064	99,136
				Rata – rata	100,069
				SD	1,62
				KV	1,62

Contoh perhitungan :

Dari hasil serapan dimasukkan ke dalam persamaan kurva baku terpilih yaitu :

$$y = 0,0092 + 0,0073x$$

Dimana :

Y = serapan

X = konsentrasi teramati

Kemudian hitung % perolehan kembali dengan rumus :

$$\frac{\text{kadar teramati}}{\text{kadar teoritis}} \times 100\%$$

Contoh :

$$y = 0,0092 + 0,0073x$$

$$0,378 = 0,0092 + 0,0073x$$

$$X = 50,643$$

$$\% \text{ perolehan kembali} = (60,643 / 50,3) \times 100\%$$

LAMPIRAN D

DATA UJI PENETAPAN KADAR TERBUTALIN SULFAT DALAM LARUTAN DAPAR FOSFAT ISOTONIS PH 6,8 PADA PANJANG GELOMBANG 276NM

Formula I					
uji	A	C teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,351	4,995	46,907	4,691	93,911
2	0,358	5,017	47,868	4,787	95,404
3	0,362	5,002	48,417	4,842	96,788
	X (%)				95,367
	SD				1,44
	KV (%)				1,51

Formula II					
uji	A	C teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,361	4,972	47,594	4,759	97,096
2	0,351	4,980	48,280	4,828	94,194
3	0,355	4,995	46,907	4,691	95,010
	X (%)				95,433
	SD				1,50
	KV (%)				1,57

Formula III					
uji	A	C teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,354	5,010	47,319	4,732	94,451
2	0,363	4,950	48,554	4,855	98,093
3	0,356	4,942	47,594	4,759	96,298
X (%)					96,281
SD					1,82
KV (%)					1,89

Formula IV					
uji	A	C teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,354	5,002	47,319	4,732	94,593
2	0,365	5,017	48,829	4,883	97,318
3	0,360	4,995	48,142	4,814	96,384
X (%)					96,098
SD					1,39
KV (%)					1,44

LAMPIRAN E

HASIL UJI HOMOGENITAS

Uji Homogenitas pada formula I

Batch I					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,359		48,005	4,801	96,109
2	0,351	4,995	47,319	4,732	93,911
3	0,364		50,064	5,006	97,483
	x (%)				95,834
	SD				1,80
	KV(%)				1,88
Batch II					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,354		47,319	4,732	94,309
2	0,358	5,017	47,868	4,787	95,404
3	0,362		48,417	4,842	96,498
	x (%)				95,404
	SD				1,09
	KV(%)				1,15

Batch III					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,368		50,064	5,006	100,08
2	0,362	5,002	48,417	4,842	96,788
3	0,374		49,240	4,924	98,434
	x (%)				98,434
	SD				1,65
	KV(%)				1,67

Uji Homogenitas pada formula II

BatchI					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,352		47,045	4,705	94,612
2	0,361	4,972	48,280	4,828	97,096
3	0,356		47,594	4,759	95,716
	x (%)				95,808
	SD				1,24
	KV(%)				1,30

Batch II					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,356		47,594	4,759	95,572
2	0,351	4,980	46,907	4,691	94,194
3	0,362		48,417	4,842	97,225
	x (%)				95,664
	SD				1,52
	KV(%)				1,59

Batch III					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,363		48,554	4,855	97,208
2	0,355	4,995	47,456	4,746	95,010
3	0,353		47,182	4,718	94,460
	x (%)				95,559
	SD				1,45
	KV(%)				1,52

Uji Homogenitas pada formula III

BatchI					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,352		47,045	4,704	93,903
2	0,354	5,010	47,319	4,732	94,451
3	0,361		48,280	4,828	96,368
	x (%)				94,907
	SD				1,29
	KV(%)				1,36

Batch II					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,369		49,378	4,938	99,756
2	0,356	4,950	48,554	4,855	98,093
3	0,353		49,652	4,965	100,311
	x (%)				99,387
	SD				1,15
	KV(%)				1,16

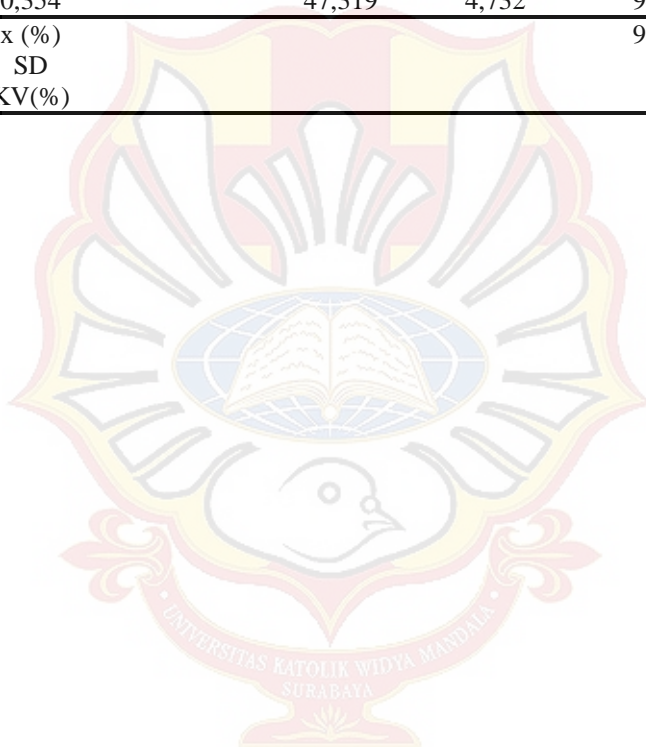
Batch III					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,361		48,280	4,828	97,687
2	0,356	4,942	47,594	4,759	96,298
3	0,353		47,182	4,718	95,465
	x (%)				96,483
	SD				1,12
	KV(%)				1,16

Uji Homogenitas pada formula IV

BatchI					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,353		47,182	4,718	94,318
2	0,354	5,002	47,319	4,732	94,593
3	0,363		48,554	4,855	97,062
	x (%)				95,324
	SD				1,51
	KV(%)				1,59

Batch II					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,359		48,005	4,801	95,677
2	0,365	5,017	48,829	4,883	97,318
3	0,369		49,378	4,938	98,412
	x (%)				97,136
	SD				1,38
	KV(%)				1,42

Batch III					
uji	A	C Teoritis ($\mu\text{g}/5,3066\text{cm}^2$)	C (ppm)	C ($\mu\text{g}/5,3066\text{cm}^2$)	% Perolehan Kembali
1	0,364		48,691	4,869	97,483
2	0,360	4,995	48,142	4,814	96,384
3	0,354		47,319	4,732	94,735
	x (%)				96,200
	SD				1,38
	KV(%)				1,44



LAMPIRAN F
HASIL UJI ADHESION TIME

FORMULA	Uji	<i>Adhesion time (jam)</i>	<i>Adhesion time (menit)</i>	Rata – rata	SD
F1	1	4,38	278	251,333	27,01
	2	4,12	252		
	3	3,54	224		
F2	1	2,45	165	170	30,81
	2	2,22	142		
	3	3,23	203		
F3	1	6,00	360	360	0
	2	6,00	360		
	3	6,00	360		
F4	1	6,00	360	360	0
	2	6,00	360		
	3	6,00	360		

LAMPIRAN G
HASIL UJI SWELLING INDEX

Formula	Uji	Wo	W1	SI	Rata – rata	SD	KV
F1	1	0,221	0,607	1,747	1,768	0,027	1,53
	2	0,216	0,596	1,759			
	3	0,209	0,586	1,798			
F2	1	0,336	1,195	2,558	2,592	0,038	1,49
	2	0,344	1,233	2,583			
	3	0,326	1,180	2,634			
F3	1	0,362	1,561	3,312	3,258	0,059	1,82
	2	0,370	1,552	3,195			
	3	0,368	1,571	3,268			
F4	1	0,353	1,292	2,660	2,606	0,050	1,92
	2	0,358	1,288	2,597			
	3	0,360	1,282	2,561			

LAMPIRAN H
HASIL UJI PELEPASAN FORMULA (-1)

Waktu (menit)	Waktu (jam)	Uji	Serapan	C	Qt	Q rata – rata	SD
5	0,0833	1	0,014	0,6567	13,5936	20,223	7,15
		2	0,016	0,9312	19,2756		
		3	0,019	1,3429	27,7986		
10	0,1667	1	0,015	0,7939	16,4346	25,905	9,98
		2	0,022	1,7546	36,3216		
		3	0,018	1,2056	24,9576		
15	0,25	1	0,019	1,343	27,799	39,163	22,19
		2	0,018	1,206	24,958		
		3	0,032	3,127	64,732		
20	0,3333	1	0,021	1,617	33,481	41,057	18,27
		2	0,019	1,343	27,799		
		3	0,031	2,990	61,891		
25	0,4167	1	0,026	2,304	47,686	42,951	5,91
		2	0,022	1,755	36,322		
		3	0,025	2,166	44,845		
30	0,5	1	0,030	2,853	59,050	50,527	8,52
		2	0,024	2,029	42,004		
		3	0,027	2,441	50,527		
60	1	1	0,039	4,088	84,619	74,202	11,48
		2	0,031	2,990	61,891		
		3	0,036	3,676	76,096		
120	2	1	0,093	11,499	238,033	216,252	26,40
		2	0,088	10,813	223,828		
		3	0,075	9,028	186,895		
180	3	1	0,107	13,420	277,807	271,178	27,59
		2	0,113	14,244	294,853		
		3	0,094	11,636	240,874		
240	4	1	0,113	14,244	294,853	313,793	21,70
		2	0,128	16,302	337,468		
		3	0,118	14,930	309,058		
300	5	1	0,121	1,342	317,581	316,634	15,65
		2	0,115	14,518	300,535		
		3	0,126	16,028	331,786		
360	6	1	0,143	18,361	380,083	350,726	31,42
		2	0,121	15,342	317,581		
		3	0,134	17,126	354,514		

LAMPIRAN I
HASIL DATA UJI PELEPASAN FORMULA (A)

Waktu (menit)	Waktu (jam)	Uji	Serapan	C	Qt	Q rata – rata	SD
5	0,0833	1	0,013	0,5194	10,7526	18,329	10,76
		2	0,014	0,6567	13,5936		
		3	0,020	1,4801	30,6396		
10	0,1667	1	0,017	1,0684	22,1167	27,799	5,68
		2	0,021	1,6174	33,4807		
		3	0,019	1,3429	27,7986		
15	0,25	1	0,019	1,343	27,799	29,693	11,48
		2	0,016	0,931	19,276		
		3	0,024	2,029	42,004		
20	0,3333	1	0,016	0,931	19,276	30,640	9,84
		2	0,022	1,755	36,322		
		3	0,022	1,755	36,322		
25	0,4167	1	0,018	1,206	24,958	35,375	18,04
		2	0,018	1,206	24,958		
		3	0,029	2,715	56,209		
30	0,5	1	0,021	1,617	33,481	47,686	19,89
		2	0,023	1,892	39,163		
		3	0,034	3,402	70,414		
60	1	1	0,026	2,304	47,686	69,467	21,32
		2	0,034	3,402	70,414		
		3	0,041	4,362	90,301		
120	2	1	0,076	9,166	189,736	194,471	21,70
		2	0,086	10,538	218,146		
		3	0,071	8,479	175,531		
180	3	1	0,083	10,126	209,623	232,351	21,45
		2	0,092	11,362	235,192		
		3	0,098	12,185	252,238		
240	4	1	0,102	12,734	263,602	240,874	24,27
		2	0,095	11,774	243,715		
		3	0,085	10,401	215,305		
300	5	1	0,117	14,793	306,217	286,330	17,74
		2	0,108	13,557	280,648		
		3	0,105	13,146	272,125		
360	6	1	0,125	15,891	328,945	327,051	19,95
		2	0,131	16,714	345,991		
		3	0,117	14,793	306,217		

LAMPIRAN J
HASIL DATA UJI PELEPASAN FORMULA (B)

Waktu (menit)	Waktu (jam)	Uji	Serapan	C	Qt	Q rata – rata	SD
5	0,0833	1	0,013	0,519	10,753	21,170	11,48
		2	0,021	1,617	33,481		
		3	0,016	0,931	19,276		
10	0,1667	1	0,024	2,029	42,004	23,064	16,65
		2	0,015	0,794	16,435		
		3	0,013	0,519	10,753		
15	0,25	1	0,018	1,206	24,958	24,011	7,15
		2	0,015	0,794	16,435		
		3	0,020	1,480	30,639		
20	0,3333	1	0,015	0,794	16,435	27,799	11,36
		2	0,019	1,343	27,799		
		3	0,023	1,892	39,163		
25	0,4167	1	0,013	0,519	10,753	31,587	18,27
		2	0,023	1,892	39,163		
		3	0,025	2,166	44,845		
30	0,5	1	0,020	1,480	30,639	43,898	11,83
		2	0,026	2,304	47,686		
		3	0,028	2,578	53,368		
60	1	1	0,028	2,578	53,368	59,997	5,91
		2	0,032	3,127	64,732		
		3	0,031	2,989	61,891		
120	2	1	0,035	3,539	73,255	82,725	18,92
		2	0,046	5,048	104,506		
		3	0,034	3,402	70,414		
180	3	1	0,055	6,284	130,075	151,856	19,34
		2	0,065	7,656	158,485		
		3	0,068	8,068	167,008		
240	4	1	0,067	7,931	164,167	184,054	25,25
		2	0,084	10,264	212,464		
		3	0,071	8,479	175,531		
300	5	1	0,076	9,166	189,736	217,199	24,16
		2	0,092	11,362	235,192		
		3	0,089	10,949	226,669		
360	6	1	0,093	11,498	238,033	268,337	28,60
		2	0,113	14,244	294,853		
		3	0,105	13,146	272,125		

LAMPIRAN K
HASIL DATA UJI PELEPASAN FORMULA (AB)

Waktu (menit)	Waktu (jam)	Uji	Serapan	C	Qt	Q rata – rata	SD
5	0,0833	1	0,013	0,519	10,753	24,011	20,55
		2	0,026	2,304	47,686		
		3	0,014	0,657	13,594		
10	0,1667	1	0,017	1,068	22,117	24,958	10,24
		2	0,022	1,755	36,322		
		3	0,015	0,794	16,435		
15	0,25	1	0,015	0,794	16,435	29,693	18,27
		2	0,017	1,068	22,117		
		3	0,027	2,441	50,527		
20	0,3333	1	0,013	0,519	10,753	30,640	17,28
		2	0,023	1,892	39,163		
		3	0,024	2,029	42,004		
25	0,4167	1	0,020	1,480	30,639	42,004	22,19
		2	0,033	3,264	67,573		
		3	0,019	1,343	27,798		
30	0,5	1	0,024	2,029	42,004	51,474	11,83
		2	0,032	3,127	64,732		
		3	0,026	2,304	47,685		
60	1	1	0,028	2,578	53,368	72,308	16,65
		2	0,039	4,088	84,619		
		3	0,037	3,813	78,934		
120	2	1	0,042	4,499	93,142	122,499	28,46
		2	0,053	6,009	124,393		
		3	0,062	7,244	149,962		
180	3	1	0,087	10,675	220,987	151,856	19,34
		2	0,068	8,067	167,077		
		3	0,079	9,577	198,258		
240	4	1	0,093	11,498	238,033	208,676	31,42
		2	0,084	10,264	212,464		
		3	0,071	8,479	175,531		
300	5	1	0,112	14,106	292,012	268,337	22,79
		2	0,096	11,911	246,556		
		3	0,103	12,871	266,443		
360	6	1	0,115	14,518	300,535	308,111	18,27
		2	0,125	15,891	328,945		
		3	0,113	14,244	294,853		

LAMPIRAN L

HASIL UJI ANOVA SWELLING INDEX DENGAN DESAIN

EXPERT

Response 2 Swelling index

ANOVA for selected factorial model

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

Source	Sum of Square	df	Mean square	F Value	p-value Prob > F
Model	3.35	3	1.12	541.94	<0.0001
<i>A-carbomer</i>	1.70	1	1.70	822.87	<0.0001
<i>B- PG</i>	0.022	1	0.022	10.71	0.0113
<i>AB</i>	1.63	1.63	792.24		<0.0001
Pure Error	0.017	8	2.063E-		
Cor Total	3.37	11	003		

The Model F-value of 541.94 implies the model is significant. There is only a 0.01% chance that a "Model F-Value" this large could occur due to noise.

Values of "Prob > F" less than 0.0500 indicate model terms are significant. In this case A, B, AB are significant model terms.

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

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

Std. Dev.	0.045	R-Squared	0.9951
Mean	2.56	Adj R-Squared	0.9933
C.V. %	1.78	Pred R-Squared	0.9890
PRESS	0.037	Adeq Precision	56.832

The "Pred R-Squared" of 0.9890 is in reasonable agreement with the "Adj R-Squared" of 0.9933.

"Adeq Precision" measures the signal to noise ratio. A ratio greater than 4 is desirable. Your ratio of 56.832 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High VIF
Intercept	2.56	1	0.013	2.53	2.59
A-	0.38	1	0.013	0.35	0.41
Carbomer	0.043	1	0.013	0.013	0.073
B-PG	1	0.013	-0.40	-0.34	1.00
AB-0.37					

Final Equation in Terms of Coded Factors:

$$\begin{aligned}
 \text{Swelling index} &= \\
 &+2.56 \\
 &+0.38 \quad * A \\
 &+0.043 \quad * B \\
 &-0.37 \quad * A * B
 \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned}
 \text{Swelling index} &= \\
 &+2.55616 \\
 &+0.37611 \quad * \text{Carbomer} \\
 &+0.04289 \quad * \text{Propilen glikol} \\
 &-0.36904 \quad * \text{Carbomer} * \text{Propilen glikol}
 \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

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

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

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

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

LAMPIRAN M

HASIL UJI ANOVA *ADHESION TIME* DENGAN DESAIN EXPERT

Response 3 Adhesion time

ANOVA for selected factorial model

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

Source	Sum of Square	df	Mean square	F Value	p-value Prob > F
Model	76824.00	3	25608.00	61.03	<0.0001
<i>A-carbomer</i>	66901.33	1	66901.33	159.45	<0.0001
<i>B- PG</i>	4961.33	1	4961.33	11.82	0.0088
<i>AB</i>	1	4961.33	11.82	0.0088	
Pure Error	3356.67	8	419.58		
Cor Total	80180.67	11			

The Model F-value of 61.03 implies the model is significant. There is only

a 0.01% chance that a "Model F-Value" this large could occur due to noise.

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

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

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

If there are many insignificant model terms (not counting those required to support hierarchy),

model reduction may improve your model.

Std. Dev.	20.48	R-Squared	0.9581
Mean	285.33	Adj R-Squared	0.9424
C.V. %	7.18	Pred R-Squared	0.9058
PRESS	7552.50	Adeq Precision	16.066

The "Pred R-Squared" of 0.9058 is in reasonable agreement with the "Adj R-Squared" of 0.9424.

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

ratio of 16.066 indicates an adequate signal. This model can be used to

navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High VIF
Intercept	285.33	1	5.91	271.70	298.97
A-Carbomer	74.67	1	5.91	61.03	88.30
B-PG	-20.33	1	5.91	-33.97	-6.70
AB20.33	1	5.91	6.70	33.97	1.00

Final Equation in Terms of Coded Factors:

$$\begin{aligned} \text{Adhesion time} = & +285.33 \\ & +74.67 * A \\ & -20.33 * B \\ & +20.33 * A * B \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned} \text{Adhesion time} = & +285.33333 \\ & +74.66667 * \text{Carbomer} \\ & -20.33333 * \text{Propilen glikol} \\ & +20.33333 * \text{Carbomer} * \text{Propilen glikol} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

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

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

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

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

LAMPIRAN N

HASIL UJI ANOVA PELEPASAN DENGAN DESAIN EXPERT

Response 4 Release

ANOVA for selected factorial model

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

Source	Sum of Square	df	Mean square	F Value	p-value Prob > F
Model	657.17	3	219.06	11.70	0.0027
<i>A-carbomer</i>	498.17	1	498.17	26.60	0.0009
<i>B- PG</i>	0.27	1	0.27	0.014	0.9081
<i>AB 158.73</i>	1	158.73	8.48	0.0195	
Pure Error	149.81	8	18.73		
Cor Total	806.99	11			

The Model F-value of 11.70 implies the model is significant. There is only a 0.27% 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, AB are significant model terms.

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

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

Std. Dev.	4.33	R-Squared	0.8144
Mean	51.80	Adj R-Squared	0.7447
C.V. %	8.35	Pred R-Squared	0.5823
PRESS	337.08	Adeq Precision	8.069

The "Pred R-Squared" of 0.5823 is in reasonable agreement with the "Adj R-Squared" of 0.7447.

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

ratio of 8.069 indicates an adequate signal. This model can be used to navigate the design space.

Factor	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
Intercept	51.80	1	1.25	48.92	54.68	
A-Carbomer	-6.44	1	1.25	-9.32	-3.56	
B-PG	0.15	1	1.25	-2.73	3.03	
AB 3.64	1	1.25	0.76	6.52	1.00	

Final Equation in Terms of Coded Factors:

$$\begin{aligned} \text{Release} = & \\ & +51.80 \\ & -6.44 * A \\ & +0.15 * B \\ & +3.64 * A * B \end{aligned}$$

Final Equation in Terms of Actual Factors:

$$\begin{aligned} \text{Release} = & \\ & +51.79767 \\ & -6.44317 * \text{Carbomer} \\ & +0.14883 * \text{Propilen glikol} \\ & +3.63700 * \text{Carbomer} * \text{Propilen glikol} \end{aligned}$$

The Diagnostics Case Statistics Report has been moved to the Diagnostics Node.

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

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

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

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

LAMPIRAN O
HASIL UJI ANOVA PENETAPAN KADAR

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	3	286.1017	95.36724	2.070092
Column 2	3	286.2999	95.43331	2.240558
Column 3	3	288.8418	96.28061	3.31627
Column 4	3	288.2945	96.09817	1.918337

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>p-value</i>	<i>F crit</i>
Between group	1.924598	3	0.641533	0.268838	0.846189	4.066181
Within Groups	19.09051	8	2.386314			
Total	21.01511	11				

LAMPIRAN P
POINT PREDICTION dengan Design Expert

Factor	Name	Level	Low Level	High Level	Std. Dev.	Coding				
A	carbomer		1.00	1.00	2.00	0.000	Actual			
B	pG		1.00	1.00	2.00	0.000	Actual			
							99% of Population			
Response	Prediction	Std Dev	SE Mean	95% CI low	95% CI high	SE Pred	95% PI low	95% PI high	95% TI low	95% TI high
Folding endurance	300	0	0		300	300	0	300	300	300
Swelling index	1.76811	0.045419	0.0262227	1.70764	1.82858	0.0524454	1.647171	1.88905	1.51918	
2.01705										
Adhesion time	251.333	20.4837	11.8263	224.062	278.605	23.6526	196.79305	305.876	139.064	
363.603										
Release	61.894	4.24954	2.45347	56.2363	67.5517	4.90694	50.578673	73.2094	38.6027	
85.1853										

LAMPIRAN Q

TABEL F

Tabel Distribusi F

Denominators for Degrees of Freedom	Numerator Degrees of Freedom								
	1	2	3	4	5	6	7	8	9
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5
2	18.81	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38
3	10.73	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04
120	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88

(Sumber: John E., 1992)

LAMPIRAN R

TABEL UJI r

DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT	DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT
1	.997	1.000	24	.388	.496
2	.950	.990	25	.381	.487
3	.878	.959	26	.374	.478
4	.811	.917	27	.367	.470
5	.754	.874	28	.361	.463
6	.707	.834	29	.355	.456
7	.666	.798	30	.349	.449
8	.632	.765	35	.325	.418
9	.602	.735	40	.304	.393
10	.576	.708	48	.288	.372
11	.553	.684	50	.273	.354
12	.532	.661	60	.250	.325
13	.514	.641	70	.232	.302
14	.497	.623	80	.217	.283
15	.482	.606	90	.205	.267
16	.468	.590	100	.195	.254
17	.456	.575	125	.174	.228
18	.444	.561	150	.159	.208
19	.433	.549	200	.138	.181
20	.423	.537	300	.113	.148
21	.413	.526	400	.098	.128
22	.404	.515	500	.088	.115
23	.396	.505	1000	.062	.081

Dikutip dari: Soedigdo & Soedigdo (1977)

LAMPIRAN S

SERTIFIKAT TERBUTALIN SULFAT



NEULAND LABORATORIES LIMITED

204, II Floor, Meridian Plaza, 6-3-853/1, Ameerpet, Hyderabad-500 016, A.P., INDIA.
 Phone : +091-40-23412934, 23412936, 23412937, 66518682, 66518683
 Fax : +091-40-23412957 E-mail : neuland@neulandiabs.com URL : www.neulandiabs.com

CERTIFICATE OF ANALYSIS

Product : TERBUTALINE SULPHATE BP	Mfg. Lic.No. : 184/MD/AP/96/B/R	
Batch No. : TS0210002	QC Ref. No. : COM/0018/010	
Quantity : 5.0 Kg.	Tested on : 26.02.2010	
Mfg. Date : February, 2010	Expiry date : January, 2015	
	Date of report : 12.03.2010	

S. No.	TEST	FINDINGS	SPECIFICATIONS
1.	Characters: a) Description b) Solubility	Almost white crystalline powder Complies	A white or almost white, crystalline powder. Freely soluble in water, slightly soluble in alcohol (ethyl alcohol).
2.	Identification Test A (IR)	Complies	The IR absorption spectrum obtained with sample, as KBr pellet should be concordant with that of working standard.
	Test B (Sulphates)	Passes	To pass the test.
3.	Tests: Appearance of solution	The solution is clear Absorbance at 400 nm : 0.01	Solution should be clear and absorbance at 400 nm should not be greater than 0.11.
4.	Acidity	0.3 ml of 0.01M NaOH consumed	Should not be more than 1.2 ml of 0.01M NaOH.
5.	Optical rotation	-0.002°	-0.10 to +0.10
6.	Related substances by HPLC		
	a) Impurity 'C'	Not detected	Not more than 0.1%
	b) Any other impurity	0.04%	Not more than 0.1%
	c) Total impurities other than impurity 'C'	0.07%	Not more than 0.1%
7.	Loss on drying (at 100-105° C. for 3 hours)	0.33% w/w	Not more than 0.5% w/w.
8.	Assay (dry basis) (potentiometry)	99.46% w/w	Not less than 98.0% w/w and not more than 101.0% w/w.

Opinion: The material complies as per BP specifications.

Page 1 of 1

Prepared by: T. Ramesh Naidu
 Chemist - QA

Checked by: K. Chiranjeevi
 Executive-QA

Approved by: N. Srinivasa Rao
 Dy. Manager - QA