LAMPIRAN B

HASIL UJI KEKERASAN TABLET NIFEDIPIN

Batch I

No	Kekerasan Tablet Nifedipin (kp)			
	Formula A	**Formula B**	**Formula C**	**Formula D**
1	15,3	15,7	15,9	16,1
2	15,5	15,1	16,1	15,9
3	15,5	16,1	15,4	15,9
4	15,3	15,3	15,2	15,5
5	15,2	15,9	15,8	15,6
6	15,5	15,9	15,9	16,1
7	15,8	16,3	16,2	16,4
8	15,9	15,2	16,2	15,5
9	15,3	15,4	16,3	15,6
10	15,7	15,6	16,5	16,1
X±SD	15,5 ± 0,23	15,65 ± 0,40	15,95 ± 0,40	15,87 ± 0,30
SD rel (%)	0,23	0,40	0,40	0,30

Batch II

No	Kekerasan Tablet Nifedipin (kp)			
	Formula A	**Formula B**	**Formula C**	**Formula D**
1	15,1	15,3	15,3	15,1
2	15,8	15,4	15,3	16,1
3	15,6	15,4	15,5	16,3
4	15,8	16,1	15,8	15,6
5	15,4	16,1	16,1	15,3
6	15,3	16,3	16,9	15,9
7	15,7	15,7	15,7	16,2
8	15,6	15,5	16,4	16,1
9	16,1	15,6	15,9	15,8
10	16,3	15,8	15,9	15,7
X± SD	15,67± 0,35	15,72± 0,34	15,88± 0,49	15,81± 0,39
SD rel (%)	0,35	0,34	0,49	0,39

Batch III

No	Kekerasan Tablet Nifedipin (kp)			
	Formula A	**Formula B**	**Formula C**	**Formula D**
1	15,2	15,8	15,6	16,2
2	15,6	16,4	15,3	15,9
3	15,8	15,8	15,4	15,8
4	15,1	16,2	15,7	16,1
5	15,2	16,1	15,8	16,4
6	15,7	15,9	15,9	15,9
7	15,9	15,7	16,1	15,7
8	16,1	15,3	16,5	15,9
9	15,9	15,2	16,4	15,4
10	15,9	15,3	15,5	15,8
X± SD	15,64± 0,35	15,77± 0,40	15,82± 0,40	15,91 ± 0,27
SD rel (%)	0,35	0,40	0,40	0,27

LAMPIRAN C

HASIL UJI KERAPUHAN TABLET NIFEDIPIN

Batch I

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	X±SD
A	1	6,011	5,989	0,365	0,382 ± 0,074
	2	5,987	5,968	0,317	
	3	6,238	6,209	0,464	
B	1	5,910	5,888	0,372	0,274 ± 0,087
	2	5,980	5,965	0,250	
	3	5,933	5,921	0,202	
C	1	6,412	6,398	0,218	0,328 ± 0,161
	2	6,315	6,299	0,253	
	3	6,409	6,376	0,514	
D	1	6,386	6,366	0,313	0,342 ± 0,025
	2	6,279	6,257	0,350	
	3	6,325	6,302	0,363	

Batch II

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	X±SD
A	1	6,011	5,989	0,365	0,382 ± 0,074
	2	5,987	5,968	0,317	
	3	6,238	6,209	0,464	
B	1	5,910	5,888	0,372	0,274 ± 0,087
	2	5,980	5,965	0,250	
	3	5,933	5,921	0,202	
C	1	6,412	6,398	0,218	0,328 ± 0,161
	2	6,315	6,299	0,253	
	3	6,409	6,376	0,514	
D	1	6,386	6,366	0,313	0,342 ± 0,025
	2	6,279	6,257	0,350	
	3	6,325	6,302	0,363	

Batch III

Formula	Replikasi	Berat awal (gram)	Berat akhir (gram)	Kerapuhan (%)	X±SD
A	1	6,011	5,989	0,365	0,382 ± 0,074
	2	5,987	5,968	0,317	
	3	6,238	6,209	0,464	
B	1	5,910	5,888	0,372	0,274 ± 0,087
	2	5,980	5,965	0,250	
	3	5,933	5,921	0,202	
C	1	6,412	6,398	0,218	0,328 ± 0,161
	2	6,315	6,299	0,253	
	3	6,409	6,376	0,514	
D	1	6,386	6,366	0,313	0,342 ± 0,025
	2	6,279	6,257	0,350	
	3	6,325	6,302	0,363	

LAMPIRAN D

HASIL PENETAPAN KADAR TABLET LEPAS LAMBAT NIFEDIPIN

Batch I

Formula	Replikasi	Abs	Csampel (µg/ml)	Cteoritis (µg/ml)	Kadar (%)	X±SD	SD rel (%)
A	1	0,520	31,14	30,70	101,44	100,17 ± 1,45	0,32
	2	0,510	30,54	30,40	100,49		
	3	0,497	29,77	30,20	98,59		
B	1	0,487	29,17	30,40	95,98	97,65 ± 1,49	0,39
	2	0,498	29,83	30,40	98,14		
	3	0,500	29,95	30,30	98,85		
C	1	0,498	29,83	30,40	98,14	98,72 ± 0,51	0,35
	2	0,503	30,13	30,40	99,11		
	3	0,502	30,07	30,40	98,92		
D	1	0,511	30,60	30,50	100,35	101,05 ± 0,80	0,27
	2	0,514	30,78	30,20	101,94		
	3	0,512	30,66	30,40	100,88		

Batch II

Formula	Replikasi	Abs	Csampel (µg/ml)	Cteoritis (µg/ml)	Kadar (%)	X± SD	SD rel (%)
A	1	0,500	29,95	30,40	98,53	99,83 ± 1,14	0,27
	2	0,511	30,60	30,40	100,68		
	3	0,509	30,48	30,40	100,29		
B	1	0,512	30,66	30,20	101,55	101,36 ± 1,90	0,35
	2	0,511	30,60	30,80	99,37		
	3	0,522	31,26	30,30	103,17		
C	1	0,497	29,77	30,40	97,94	98,98 ± 1,64	0,35
	2	0,512	30,66	30,40	100,88		
	3	0,498	29,83	30,40	98,14		
D	1	0,518	31,02	30,40	102,05	100,55 ± 1,50	0,31
	2	0,507	30,36	30,20	100,56		
	3	0,501	30,01	30,30	99,05		

Batch III

Formula	Replikasi	Abs	Csampel (µg/ml)	Cteoritis (µg/ml)	Kadar (%)	X± SD	SD rel (%)
A	1	0,498	29,83	30,30	98,46	99,44 ± 1,22	0,28
	2	0,501	30,01	30,30	99,05		
	3	0,510	30,54	30,30	100,82		
B	1	0,512	30,66	30,20	101,55	99,99 ± 1,60	0,39
	2	0,508	30,42	30,40	100,09		
	3	0,499	29,89	30,40	98,33		
C	1	0,505	30,25	30,40	99,51	101,07 ± 1,67	0,37
	2	0,512	30,66	30,40	100,88		
	3	0,522	31,26	30,40	102,84		
D	1	0,496	29,71	30,70	96,79	97,90 ± 1,02	0,31
	2	0,498	29,83	30,40	98,14		
	3	0,503	30,13	30,50	98,79		

LAMPIRAN E

CONTOH PERHITUNGAN

Contoh perhitungan sudut diam:

Formula A:

W persegi panjang = 4,98 gram

W lingkaran = 1,25 gram

Luas persegi panjang = 21,59 x 27,94

= 603,2246 cm^2

Luas lingkaran $= \frac{1,25}{4,98} \times 603,2246$ = 151,41 cm^2

A $= \pi.r^2$

$r^2 = \frac{A}{\pi}$

$= \frac{151,41}{3,1} = 48,19$

r = 6,94 cm

tg $\alpha = \frac{t}{r} = \frac{3,2}{6,94} = 0,460$

α = 24,74°

Contoh perhitungan indeks kompresibilitas:

Formula A :

Berat gelas = 134,92 g (W_1)

Berat gelas + granul = 200,24 g (W_2)

V_1 = 100 ml

V_2 = 87 m

Bj nyata = $\frac{(W_2 - W_1)}{V_1} = \frac{(200{,}24 - 134{,}92)}{100} = 0{,}6532$

Bj mampat = $\frac{(W_2 - W_1)}{V_2} = \frac{(200{,}24 - 134{,}92)}{87} = 0{,}7870$

% kompresibilitas = $\left(1 - \frac{\text{Bj.nyata}}{\text{Bj.mampat}}\right) \text{x}\, 100\% = 13{,}0\%$

Contoh perhitungan akurasi & presisi:

Bahan aktif (mg)	**Matriks (mg)**	**+Dapar fosfat pH 6,8 ad**	**Pipet**	**%**	**+Dapar fosfat pH 6,8 ad**	**Konsentrasi (ppm)**
30	270	100	1	100	10	30

Absorbansi = 0,482 → y = 0,0168x +0,0032

Konsentrasi sebenarnya = 28,50 ppm

Konsentrasi teoritis = 29,00 ppm

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

= (28,50 / 29,00) x 100%

= 98,27%

Untuk menghitung % KV = $\frac{SD}{\overline{X}} x 100\%$

= $\frac{1{,}6189}{99{,}47} x 100\%$

= 1,6275 %

xi

Contoh perhitungan % obat terlepas:

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

Formula A replikasi 1 pada t = 30 menit

$$\% \text{ obat terlepas} = \frac{14,2393}{\frac{99,82}{100} \times 30} \times 100\% = 47,55\%$$

Contoh perhitungan AUC pada disolusi:

Rumus: $\frac{W_{tn} - W_{tn-1}}{2} x(t_n - t_{n-1})$

Formula A *batch* 1

Wt_{n-1} = 15,7756

Wt_n = 17,3837

t_n = 90 menit

t_{n-1} = 60 menit

$$\text{AUC} = \frac{17,3837 + 15,7756}{2} x(90 - 60)$$

= 497,38

Luas □ = 360 x penetapan kadar x dosis

= 360 x 99,82% x 30 mg

= 10780,56

% ED Formula A *batch* 1= (∑ AUC / luas □) x 100%

= (8442,3015/10780,56) x 100%

= 78,31 %

Perhitungan persamaan orde satu:

Rumus: ln ($\overline{X}$ -C_t) = ln C_0 - k . t

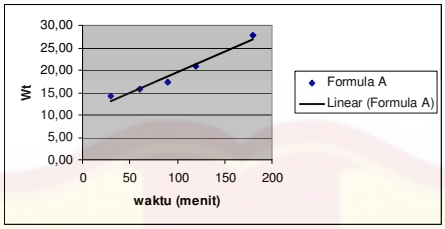
Dari persamaan regresi ln ($\overline{X}$-C_t) *versus* t (waktu), maka didapatkan suatu persamaan regresi dan nilai r, *slope* serta *intersept*. Nilai k_{diss} adalah –*slope*.

$\overline{X}$ adalah rata-rata penetapan kadar.

LAMPIRAN F

PERSAMAAN FORMULA A

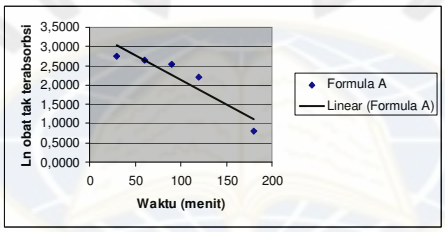
Persamaan Orde Nol



r = 0,968

r tabel = 0,404

Persamaan Orde Satu



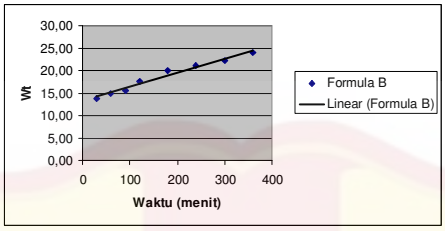
r = -0,867

r tabel = 0,404

LAMPIRAN G

PERSAMAAN FORMULA B

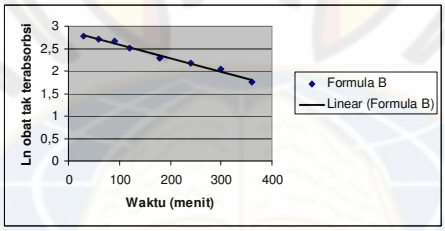
Persamaan Orde Nol



r = 0,986

r tabel = 0,404

Persamaan Orde Satu



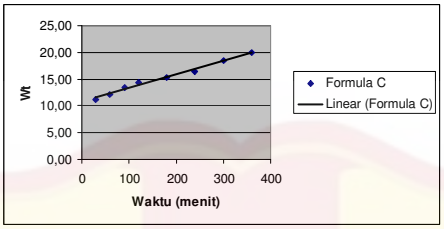
r = 0,994

r tabel = 0,404

LAMPIRAN H

PERSAMAAN FORMULA C

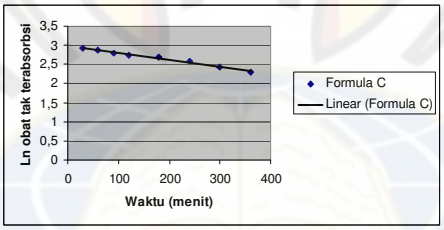
Persamaan Orde Nol



r = 0,994

r tabel = 0,404

Persamaan Orde Satu



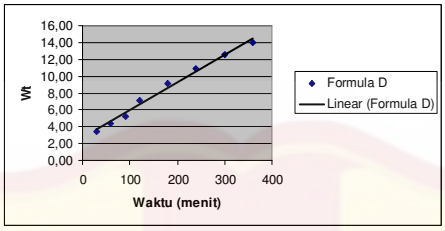
r = 0,986

r tabel = 0,404

LAMPIRAN I

PERSAMAAN FORMULA D

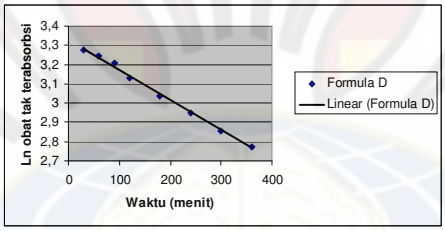
Persamaan Orde Nol



r = 0,994

r tabel = 0,404

Persamaan Orde Satu



r = 0,998

r tabel = 0,404

LAMPIRAN J

SERTIFIKAT ANALISIS GUAR GUM

102

Lampiran 24

Sertifikat *Guar Gum*

degussa.
creating essentials

Certificate of Analysis

Product:	**EMULCOLL 200 SP**
Batch:	**# 507855**
Produktionsdatum / Manufacturing date:	**06 / 2005**
Mindesthaltbarkeit / Expiry date:	**06 / 2008**

TYPEANALYSIS

Protein	4,0 %
Fat	0,5 %
Moisture	9,0 %
Crude Fibre	2,0 %
Ashes	1,0 %
pH-Value	6,0
Galactomannan	80 - 85 %
Viscosity (2 h)	5150 mPa-s
Viscosity (24 h)	5850 mPa-s

Hamburg, 1. Juli 2005

i. A. Brit Bohneidereit

LAMPIRAN K

SERTIFIKAT ANALISIS POLIVINIL PIROLIDON K-30

杭州南杭化工有限公司
NANHANG INDUSTRIAL CO.,LTD
地址:中国杭州市西湖区周浦乡姚家坞

CERTIFICATE OF ANALYSIS

Product	PVP K-30 USP/BP		
Batch No.	20051213	Quantity	2025KGS
Manufacture Date	DEC.,2005	Expiry Date	DEC.,2008

ITEMS	SPECIFICATIONS	TEST RESULTS
Characteristics	A white, fine powder	Complies
Identification	Positive	Positive
Water	5% max	2.8%
Residue on ignition	0.1% max	0.02%
K-Value	27-32	30.7
Heavy metals(Lead)	10ppm max	Complies
Nitrogen	11.5%-12.8%	12.2%
Vinylpyrrolidone	0.2% max	0.032%
Aldehydes	0.05% max	Complies
Ph Value	3.0-7.0	3.62
Hydrazine	1ppm max	Complies
Peroxides	400ppm max	Complies
Microbial Limits(By annual verification test)	Salmonalla	Negative
	Coli	Negative
	Coliforms <1CFU/gm	Conform
	Standard Plate Count<10,000CFU/gm	Conform
	Mold & Yeast <1,000 CFU/gm	Conform

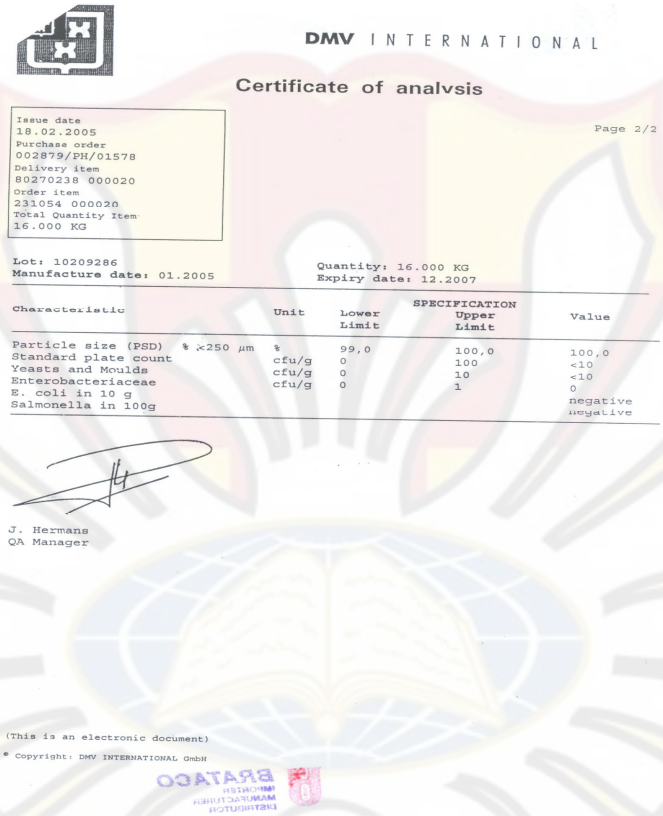
Conclusion: IT CONFORMS USP/BP

Analyst: Wang liu ling Checker: li ling Head of Q.C Dept: Wang xiao fang

megAsetia
PT. MEGASETIA AGUNG KIMIA

LAMPIRAN L

SERTIFIKAT ANALISIS LAKTOSA



DMV INTERNATIONAL

Certificate of analysis

Page 2/2

Issue date
18.02.2005
Purchase order
002879/PH/01578
Delivery item
80270238 000020
Order item
231054 000020
Total Quantity Item
16.000 KG

Lot: 10209286
Manufacture date: 01.2005

Quantity: 16.000 KG
Expiry date: 12.2007

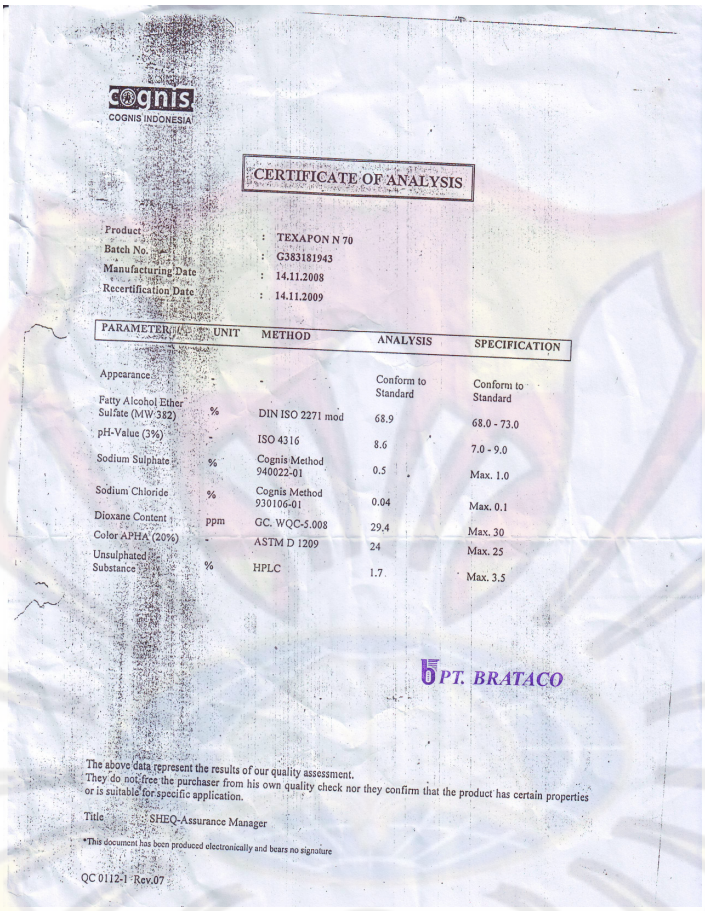
Characteristic	Unit	SPECIFICATION Lower Limit	Upper Limit	Value
Particle size (PSD) % <250 µm	%	99,0	100,0	100,0
Standard plate count	cfu/g	0	100	<10
Yeasts and Moulds	cfu/g	0	10	<10
Enterobacteriaceae	cfu/g	0	1	0
E. coli in 10 g				negative
Salmonella in 100g				negative

J. Hermans
QA Manager

(This is an electronic document)

LAMPIRAN M

SERTIFIKAT ANALISIS SODIUM LAURIL SULFAT



cognis
COGNIS INDONESIA

CERTIFICATE OF ANALYSIS

Product : TEXAPON N 70
Batch No. : G383181943
Manufacturing Date : 14.11.2008
Recertification Date : 14.11.2009

PARAMETER	UNIT	METHOD	ANALYSIS	SPECIFICATION
Appearance	-	-	Conform to Standard	Conform to Standard
Fatty Alcohol Ether Sulfate (MW 382)	%	DIN ISO 2271 mod	68.9	68.0 - 73.0
pH-Value (3%)	-	ISO 4316	8.6	7.0 - 9.0
Sodium Sulphate	%	Cognis Method 940022-01	0.5	Max. 1.0
Sodium Chloride	%	Cognis Method 930106-01	0.04	Max. 0.1
Dioxane Content	ppm	GC. WQC-5.008	29.4	Max. 30
Color APHA (20%)	-	ASTM D 1209	24	Max. 25
Unsulphated Substance	%	HPLC	1.7	Max. 3.5

PT. BRATACO

The above data represent the results of our quality assessment.
They do not free the purchaser from his own quality check nor they confirm that the product has certain properties or is suitable for specific application.

Title : SHEQ-Assurance Manager

*This document has been produced electronically and bears no signature

QC 0112-1 Rev.07

LAMPIRAN N

SERTIFIKAT ANALISIS MAGNESIUM STEARAT

PETER GREVEN
Partner der Industrie

QUALITÄTSMANAGEMENT

CERTIFICATE OF ANALYSIS

customer: PT BRATACO
contact person:
FAX:
your order-number: PTB0735/V1104 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
ntification A	oC	Ph.Eur	59
ation A	metal reaction	USP/NF	passes test
tification B	retention time GC	USP/NF	retentions match
idity or	ml 0,01N HCl	Ph.Eur	<0,5
alinity	ml 0,01 N NaOH	Ph.Eur	<0,5
avy metals as Pb	ppm	JP	<20
ad	ppm	BAE 300-B	<1
dmium	ppm	BAE 300-B	<1
ckel	ppm	BAE 300-B	<1
hloride	%	Ph.Eur	<0,1
ulfate	%	Ph.Eur	<0,5
id value of the fatty acid	mg KOH/g	Ph.Eur	204,8
ative content of stearic acid	%	USP/NF	65,1
. cont. of stearic and palmetic acid	%	USP/NF	98,9
robic microbial count	cfu/g	USP/NF	<10
lds & Yeasts	cfu/g	USP/NF	105
scherichia coli	cfu/g	USP/NF	absent
lmonella Species	cfu/g	USP/NF	absent
ganic volatile impurties		USP/NF	meets USP/NF
s on drying	%	BAE 600	3,9
agnesium content	%	BAE 200 o	4,7
e fatty acid	%	BAE 400	0,6
ave rosidue at 200 mesh	%	BAE 605	0,2
lk density tapped	g/ml	BAE 611a	0,32
ecific surface area BET	qm/g	USP/NF	10,0
ntamination		BAE 601	in accordance

Venlo, 27.08.04

datas of the obove mentioned delivery are based upon careful test according to the guidlines of our
lity assurance system. They do not release the customer from entry control. Besides we do not garantee
rial properties for concrete applications.
certificate was issued by EDV and does not bear a signature.

BRATACO
MANUFACTURER
DISTRIBUTOR

LAMPIRAN O

TABEL Z

z	0	1	2	3	4	5	6	7	8	9
.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
.2	.5793	.5832	.5871	.5920	.5948	.5987	.6026	.6064	.6103	.6141
.3	.6179	.6217	.6255	.6293	.6221	.6368	.6406	.6443	.6480	.6517
.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
.7	.7580	.7611	.7642	.7673	.7703	.7734	.7764	.7794	.7823	.7852
.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9278	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9430	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9615	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9648	.9656	.9664	.9671	.9678	.9686	.9693	.9700	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9762	.9767
2.0	.9772	.9778	.9783	.9788	.9792	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9874	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.	.9987	.9990	.9993	.9995	.9997	.9998	.9998	.9999	.9999	1.0000

z	0	1	2	3	4	5	6	7	8	9
−3.	.0013	.0010	.0007	.0005	.0003	.0002	.0002	.0001	.0001	.0000
−2.9	.0019	.0018	.0017	.0017	.0016	.0016	.0015	.0015	.0014	.0014
−2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
−2.7	.0035	.0034	.0033	.0032	.0021	.0030	.0029	.0028	.0027	.0026
−2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
−2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
−2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
−2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
−2.2	.0139	.0136	.0132	.0129	.0126	.0122	.0119	.0116	.0113	.0110
−2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
−2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
−1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0238	.0233
−1.8	.0359	.0352	.0344	.0336	.0329	.0322	.0314	.0307	.0300	.0294
−1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
−1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
−1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0570	.0559
−1.4	.0800	.0793	.0778	.0764	.0749	.0735	.0722	.0708	.0694	.0681
−1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
−1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
−1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
−1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
−.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
−.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
−.7	.2420	.2389	.2358	.2327	.2297	.2266	.2236	.2206	.2177	.2148
−.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
−.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
−.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
−.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
−.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
−.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
−.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

Dikutip dari: Gennaro, A.R. (1970)

LAMPIRAN P

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 Q

TABEL UJI HSD (0,05)

d.k. \ k	2	3	4	5	6	7	8	9	10	11
5	3.64	4.60	5.22	5.67	6.03	6.33	6.58	6.80	6.99	7.17
6	3.46	4.34	4.90	5.30	5.63	5.90	6.12	6.32	6.49	6.65
7	3.34	4.16	4.68	5.06	5.36	5.61	5.82	6.00	6.16	6.30
8	3.26	4.04	4.53	4.89	5.17	5.40	5.60	5.77	5.92	6.05
9	3.20	3.95	4.41	4.76	5.02	5.24	5.43	5.59	5.74	5.87
10	3.15	3.88	4.33	4.65	4.91	5.12	5.30	5.46	5.60	5.72
11	3.11	3.82	4.26	4.57	4.82	5.03	5.20	5.35	5.49	5.61
12	3.08	3.77	4.20	4.51	4.75	4.95	5.12	5.27	5.39	5.51
13	3.06	3.73	4.15	4.45	4.69	4.88	5.05	5.19	5.32	5.43
14	3.03	3.70	4.11	4.41	4.64	4.83	4.99	5.13	5.25	5.36
15	3.01	3.67	4.08	4.37	4.59	4.78	4.94	5.08	5.20	5.31
16	3.00	3.65	4.05	4.33	4.56	4.74	4.90	5.03	5.15	5.26
17	2.98	3.63	4.02	4.30	4.52	4.71	4.86	4.99	5.11	5.21
18	2.97	3.61	4.00	4.28	4.49	4.67	4.82	4.96	5.07	5.17
19	2.96	3.59	3.98	4.25	4.47	4.65	4.79	4.92	5.04	5.14
20	2.95	3.58	3.96	4.23	4.45	4.62	4.77	4.90	5.01	5.11
24	2.92	3.53	3.90	4.17	4.37	4.54	4.68	4.81	4.92	5.01
30	2.89	3.49	3.85	4.10	4.30	4.46	4.60	4.72	4.82	4.92
40	2.86	3.44	3.79	4.04	4.23	4.39	4.52	4.63	4.73	4.82
60	2.83	3.40	3.74	3.98	4.16	4.31	4.44	4.55	4.65	4.73
120	2.80	3.36	3.68	3.92	4.10	4.24	4.36	4.47	4.56	4.64
∞	2.77	3.31	3.63	3.86	4.03	4.17	4.29	4.39	4.47	4.55

Catatan kaki: Dari *Annals of mathematical statistics.* Diulang cetak seizin penerbit, The Institute of Mathematical Statistics.

Sumber: Schefler (1987).

LAMPIRAN R

HASIL UJI STATISTIK KEKERASAN TABLET FORMULA A

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	11	170,5	15,5	0,05
Column 2	11	172,37	15,67	0,1161
Column 3	11	172,04	15,64	0,1124

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,181133	2	0,090567	0,975583	0,388614	3,31583
Within Groups	2,785	30	0,092833			
Total	2,966133	32				

LAMPIRAN S

HASIL UJI STATISTIK KEKERASAN TABLET FORMULA B

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	11	172,15	15,65	0,1445
Column 2	11	172,92	15,72	0,1076
Column 3	11	173,47	15,77	0,1481

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,079933	2	0,039967	0,2996	0,743306	3,31583
Within Groups	4,002	30	0,1334			
Total	4,081933	32				

LAMPIRAN T

HASIL UJI STATISTIK KEKERASAN TABLET FORMULA C

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	11	175,45	15,95	0,1465
Column 2	11	174,68	15,88	0,2216
Column 3	11	174,02	15,82	0,1496

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,093133	2	0,046567	0,269847	0,765329	3,31583
Within Groups	5,177	30	0,172567			
Total	5,270133	32				

LAMPIRAN U

HASIL UJI STATISTIK KEKERASAN TABLET FORMULA D

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	11	174,57	15,87	0,0861
Column 2	11	173,91	15,81	0,1389
Column 3	11	175,01	15,91	0,0689

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,055733	2	0,027867	0,28445	0,754434	3,31583
Within Groups	2,939	30	0,097967			
Total	2,994733	32				

LAMPIRAN V

HASIL UJI STATISTIK KEKERASAN TABLET ANTAR FORMULA *BATCH* 1

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	10	155	15,5	0,055556
Column 2	10	156,5	15,65	0,160556
Column 3	10	159,5	15,95	0,162778
Column 4	10	158,7	15,87	0,095667

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1,26675	3	0,42225	0,55912	0,23586	2,866266
Within Groups	4,271	36	0,118639			
Total	5,53775	39				

LAMPIRAN W

HASIL UJI STATISTIK KEKERASAN TABLET ANTAR FORMULA *BATCH* 2

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	10	156,7	15,67	0,129
Column 2	10	157,2	15,72	0,119556
Column 3	10	158,8	15,88	0,246222
Column 4	10	158,1	15,81	0,154333

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,262	3	0,087333	0,538172	0,659171	2,866266
Within Groups	5,842	36	0,162278			
Total	6,104	39				

LAMPIRAN X

HASIL UJI STATISTIK KEKERASAN TABLET ANTAR FORMULA *BATCH* 3

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	10	156,4	15,64	0,124889
Column 2	10	157,7	15,77	0,164556
Column 3	10	158,2	15,82	0,166222
Column 4	10	159,1	15,91	0,076556

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,381	3	0,127	0,954489	0,424675	2,866266
Within Groups	4,79	36	0,133056			
Total	5,171	39				

LAMPIRAN Y

HASIL UJI STATISTIK KERAPUHAN TABLET FORMULA A

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN Z

HASIL UJI STATISTIK KERAPUHAN TABLET FORMULA B

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AA

HASIL UJI STATISTIK KERAPUHAN TABLET FORMULA C

ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AB

HASIL UJI STATISTIK KERAPUHAN TABLET FORMULA D ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AC

HASIL UJI STATISTIK KERAPUHAN TABLET *BATCH* I ANTAR FORMULA

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AD

HASIL UJI STATISTIK KERAPUHAN TABLET *BATCH* II ANTAR FORMULA

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AE

HASIL UJI STATISTIK KERAPUHAN TABLET *BATCH* III ANTAR FORMULA

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	0.54	0.18	1.16E-33
Column 2	3	0.54	0.18	1.16E-33
Column 3	3	0.54	0.18	1.16E-33

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	2	0	0	1	5.143253
Within Groups	6.93E-33	6	1.16E-33			
Total	6.93E-33	8				

LAMPIRAN AF

HASIL UJI STATISTIK PENETAPAN KADAR TABLET FORMULA A ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	300,52	100,1733	2,105833
Column 2	3	299,5	99,83333	1,312033
Column 3	3	298,33	99,44333	1,508433

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0,8006	2	0,4003	0,243773	0,791065	5,143253
Within Groups	9,8526	6	1,6421			
Total	10,6532	8				

LAMPIRAN AG

HASIL UJI STATISTIK PENETAPAN KADAR TABLET FORMULA B ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	292,97	97,65667	2,234433
Column 2	3	304,09	101,3633	3,636133
Column 3	3	299,97	99,99	2,5996

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	21,06987	2	10,53493	3,731308	0,088525	5,143253
Within Groups	16,94033	6	2,823389			
Total	38,0102	8				

LAMPIRAN AH

HASIL UJI STATISTIK PENETAPAN KADAR TABLET FORMULA C ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	296,17	98,72333	0,264233
Column 2	3	296,96	98,98667	2,698533
Column 3	3	303,23	101,0767	2,801233

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9,975622	2	4,987811	2,596015	0,154073	5,143253
Within Groups	11,528	6	1,921333			
Total	21,50362	8				

LAMPIRAN AI

HASIL UJI STATISTIK PENETAPAN KADAR TABLET FORMULA D ANTAR *BATCH*

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	303,17	101,0567	0,655433
Column 2	3	301,66	100,5533	2,250033
Column 3	3	293,72	97,90667	1,040833

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	17,18069	2	8,590344	2,530429	0,331191	5,143253
Within Groups	7,8926	6	1,315433			
Total	25,07329	8				

LAMPIRAN AJ

HASIL UJI STATISTIK PENETAPAN KADAR TABLET ANTAR FORMULA *BATCH* 1

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	300,52	100,1733	2,105833
Column 2	3	292,97	97,65667	2,234433
Column 3	3	296,17	98,72333	0,264233
Column 4	3	303,17	101,0567	0,655433

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	20,51896	3	6,839653	1,201323	0,227704	4,066181
Within Groups	10,51987	8	1,314983			
Total	31,03882	11				

LAMPIRAN AK

HASIL UJI STATISTIK PENETAPAN KADAR TABLET ANTAR FORMULA *BATCH* 2

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	299,5	99,83333	1,312033
Column 2	3	304,09	101,3633	3,636133
Column 3	3	296,96	98,98667	2,698533
Column 4	3	301,66	100,5533	2,250033

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9,251425	3	3,083808	1,246394	0,355482	4,066181
Within Groups	19,79347	8	2,474183			
Total	29,04489	11				

LAMPIRAN AL

HASIL UJI STATISTIK PENETAPAN KADAR TABLET ANTAR FORMULA *BATCH* 3

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	298,33	99,44333	1,508433
Column 2	3	299,97	99,99	2,5996
Column 3	3	303,23	101,0767	2,801233
Column 4	3	293,72	97,90667	1,040833

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	15,67349	3	5,224497	2,628645	0,12203	4,066181
Within Groups	15,9002	8	1,987525			
Total	31,57369	11				

LAMPIRAN AM

HASIL UJI STATISTIK % ED_{360}

PERHITUNGAN ANAVA

(Uji Statistik % ED_{360})

Anova: Single

Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	242,698	80,8995	5,09457
Column 2	3	190,096	63,3654	3,86787
Column 3	3	152,417	50,8058	0,59849
Column 4	3	93,8404	31,2801	0,22882

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	3932,723	3	1310,908	535,623	1,48E-09	4,06618
Within Groups	19,57955	8	2,44744			
Total	3952,303	11				

Keterangan :

Fhitung > Ftabel (0,05) sehingga H ditolak dan ada perbedaan yang bermakna antar formula

HSD = 3.543435

		Formula A	Formula B		Formula C		Formula D	
	Mean	80.89958	63.36542		50.80584		31.28014	
Formula A	80.89958	0	17.53417	*	30.09375	*	49.61944	*
Formula B	63.36542		0		12.55958	*	32.08528	*
Formula C	50.80584				0		19.5257	*
Formula D	31.28014						0	

Keterangan

* : Perbedaannya signifikan, karena selisihnya > HSD(5%)

TS : Perbedaannya tidak signifikan, karena selisihnya < HSD(5%)

LAMPIRAN AN

HASIL UJI STATISTIK % OBAT TERLEPAS

PERHITUNGAN ANAVA

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Column 1	3	294.3	98.1	0.8341
Column 2	3	267.47	89.15667	84.45613
Column 3	3	186.05	62.01667	24.91363
Column 4	3	141.87	47.29	0.0217

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	5002.439	3	1667.48	60.51154	7.68E-06	4.066181
Within Groups	220.4511	8	27.55639			
Total	5222.89	11				

Keterangan :

Fhitung > Ftabel (0,05) sehingga H ditolak dan ada perbedaan yang bermakna antar formula

Hasil Uji HSD % ED_{360}

HSD = 11.88993

		Formula A	Formula B		Formula C		Formula D	
	Mean	98.1	89.15667		62.01667		47.29	
			11.94333					
formula A	98.1	0	3	*	36.08333	*	50.81	*
formula B	89.15667		0		27.14	*	41.86667	*
formula C	62.01667				0		14.72667	*
formula D	47.29						0	

Keterangan

* : Perbedaannya signifikan, karena selisihnya > HSD(5%)

TS : Perbedaannya tidak signifikan, karena selisihnya < HSD(5%)

HSD(5%) = 0.4843

LAMPIRAN AO

UJI F KURVA BAKU

Uji Kesamaan Regresi (Dapar Fosfat pH 6,8 yang mengandung 1% sodium lauril sulfat)

REPLIKASI 1

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
12,48	0,201	155,7504	0,0404	2,5085
20,8	0,332	432,6400	0,1102	6,9056
31,2	0,496	973,4400	0,2460	15,4752
41,6	0,661	1730,5600	0,4369	27,4976
49,92	0,792	2492,0064	0,6273	39,5366
		5784,3968	1,4608	91,9235

REPLIKASI 2

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
12,24	0,209	149,8176	0,0437	2,5582
20,40	0,348	416,1600	0,1211	7,0992
30,60	0,521	936,3600	0,2714	15,9426
40,80	0,692	1664,6400	0,4789	28,2336
48,96	0,829	2397,0816	0,6872	40,5878
		5564,0592	1,6023	94,4214

REPLIKASI 3

KONSENTRASI	ABSORBANSI	X^2	Y^2	XY
12,24	0,210	149,8176	0,0441	2,5704
20,40	0,347	416,1600	0,1204	7,0788
30,60	0,520	936,3600	0,2704	15,9120
40,80	0,692	1664,6400	0,4789	28,2336
48,96	0,830	2397,0816	0,6889	40,6368
		5564,0592	1,6027	94,4316

	ΣX^2	ΣXY	ΣY^2	N	SSi	RDF
Regresi I	5784,3968	91,9235	1,4608	5	1,4449	4
Regresi II	5564,0592	94,4214	1,6023	5	1,5854	4
Regresi III	5564,0592	94,4316	1,6027	5	1,5857	4
	16912,5152	280,7765	4,6658		4,6160	

SSc= 4,649228299

F= 0,043195248 < Ftabel0,05(2;12) 3,89