


LAMPIRAN

Lampiran 1. Determinasi Tanaman

 KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS NEGERI SEMARANG
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
LABORATORIUM JURUSAN BIOLOGI
Alamat : Gedung D11 FMIPA UNNES Kampus Sekeloa Gunungpati Semarang 50228
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Semarang, 06 Maret 2019


No. : 197/UN/37.1.4.5/LT/2019
Lampiran : -
Perihal : Hasil identifikasi tumbuhan

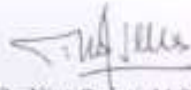
Kepada Yth.
Sdr. Novi Rovita – NIM. 33101500392
Mahasiswa Program Studi Farmasi - Fakultas Kedokteran
Universitas Islam Sultan Agung (UNISSULA)
Semarang

Dengan hormat,
Bersama ini kami sampaikan hasil identifikasi tumbuhan yang Saudara kirimkan ke Laboratorium Taksonomi Tumbuhan Jurusan Biologi-FMIPA Universitas Negeri Semarang (UNNES), adalah sebagai berikut.

Divisio : Magnoliophyta
Classis : Magnoliopsida
SubClassis : Dilleniidae
Ordo : Capparales
Familia : Moringaceae
Genus : Moringa
Species : *Moringa oleifera* Lam.
Vern. name : Kelor / Horseradish tree

Demikian, semoga berguna bagi Saudara.

Mengingat
Ketua Jurusan Biologi FMIPA UNNES

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Kepala Laboratorium Biologi

Dr. Ning Setlati, M.Si
NIP. 195903101987032001

Lampiran 2. Perhitungan Rendemen

Rendemen Esktrak Kental Daun Kelor

$$\text{Rendemen} = \frac{\text{Massa Ekstrak Kental Daun Kelor yang diperoleh (gram)}}{\text{Masa daun (gram)}} \times 100\%$$

$$\text{Rendemen} = \frac{79,38 \text{ gram}}{335 \text{ gram}} \times 100\%$$

$$\text{Rendemen} = 23,69 \%$$



Massa Daun



Massa Ekstrak Kental



Kadar Air

Lampiran 3. Gambar Uji fisik krim



1. Formula 1-8



Formula 1



Formula 2



Formula 3



Formula 4



Formula 5



Formula 6



Formula 7



Formula 8

2. Kontrol Positif (Betamethason Valerate Krim 0,1%)



Replikasi 1



Replikasi 2



Replikasi 3

3. Formula Optimum



Replikasi 1
pH Formula 1-8



Replikasi 2



Replikasi 3



Formula 1



Formula 2



Formula 3



Formula 4



Formula 5



Formula 6



Formula 7



Formula 8

Kontrol Positif (Betamethason Valerate Krim 0,1%)



Replikasi 1



Replikasi 2



Replikasi 3

Formula Optimum



Replikasi 1



Replikasi 2



Replikasi 3

Pemeriksaan Daya Sebar

Formula 1-8



Formula 1



Formula 2



Formula 3



Formula 4



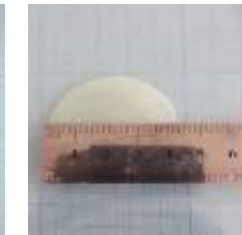
Formula 5



Formula 6



Formula 7



Formula 8

Kontrol Positif (Betamethason Valerate Krim 0,1%)



Replikasi 1

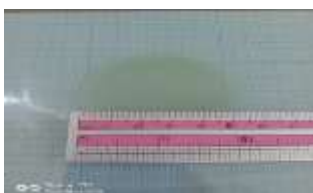


Replikasi 2



Replikasi 3

Formula Optimum



Replikasi 1



Replikasi 2



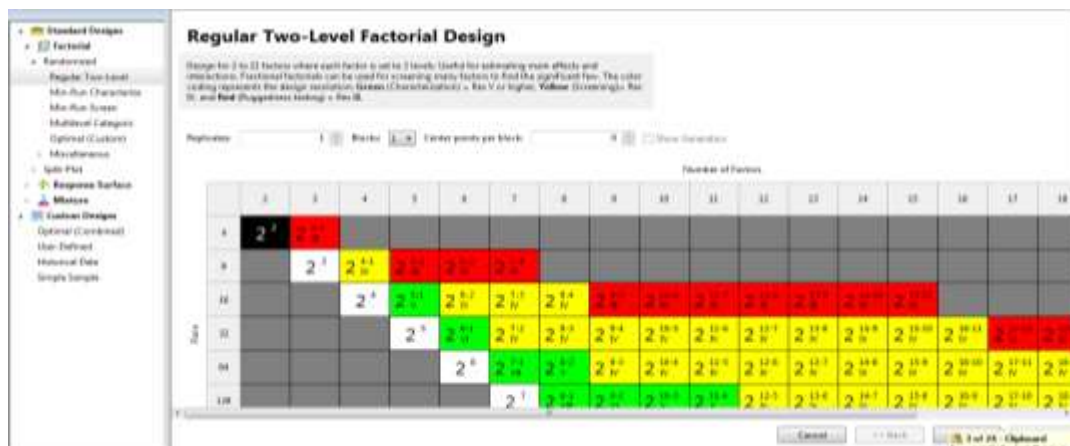
Replikasi 3

Lampiran 4. Optimasi Formula pada *design expert* menunjukkan hasil Analisa menggunakan SLD (*Simplex Lattice Design*)

1. Klik New Design



2. Klik Mixture



3. Pada Kolom Name diisi Emulgator → klik Next



4. Respons diisi 3 (daya sebar, ph, dan viskositas) → Klik Finish



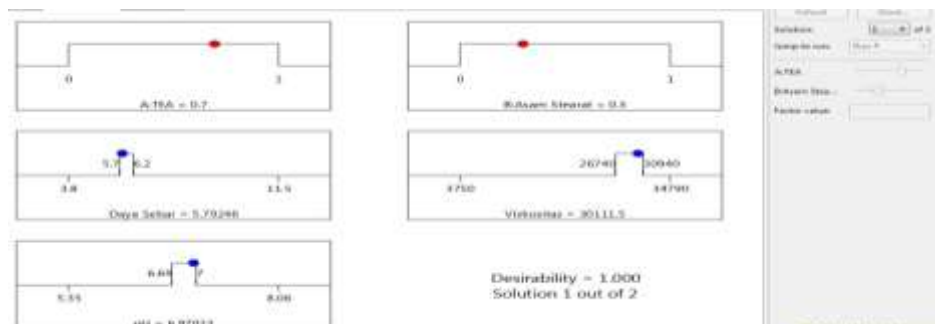
5. Muncul hasil perbandingan emulgator berikut ini

Run	Component 1 A.TEA	Component 2 B.Asem Stearat	Response 1 Daya sebat	Response 2 Viskositas	Response 3 pH
1	0	1			
2	0.75	0.25			
3	0.5	0.5			
4	0.25	0.75			
5	1	0			
6	0.5	0.5			
7	0	1			
8	1	0			

6. Masukkan Hasil Uji fisik

Run	Component 1 A.TEA	Component 2 B.Asem Stearat	Response 1 Daya sebat	Response 2 Viskositas	Response 3 pH
1	0	1	4.3	20950	5.55
2	0.75	0.25	5.2	34790	7.08
3	0.5	0.5	6.0	9850	6.06
4	0.25	0.75	11.3	3750	7.74
5	1	0	8.8	2190	5.37
6	0.5	0.5	4.4	13950	7.05
7	0	1	4.4	11250	7.14
8	1	0	4.3	19450	7.06

7. Sehingga muncul Solution, yang didapatkan 2 solusi



1. Respon pH

ANOVA for Cubic model

Response 3: pH

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	6.25	3	2.08	50.80	0.0005	significant
⁽¹⁾ Linear Mixture	5.23	1	5.23	202.57	0.0001	
AB	0.2993	1	0.2993	11.60	0.0271	
AB(A-B)	0.7282	1	0.7282	28.22	0.0060	
Residual	0.1032	4	0.0258			
Lack of Fit	0.0278	1	0.0278	1.10	0.3706	not significant
Pure Error	0.0755	3	0.0252			
Cor Total	6.36	7				

Coefficients	Coded Equation	Real Equation	Actual Equation
Final Equation in Terms of L_Pseudo Components			
pH	=		
	+7.91	* A	
	+5.47	* B	
	+1.73	* AB	
	-6.83	* AB(A-B)	
The equation in terms of coded factors can be used to make predictions about the response for given levels of each factor.			

2. Respon Daya sebar

ANOVA for Quadratic model

Response 1: Daya Sebar

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	46.56	2	23.28	17.77	0.0053	significant
⁽¹⁾ Linear Mixture	34.17	1	34.17	26.08	0.0037	
AB	12.39	1	12.39	9.46	0.0276	
Residual	6.55	5	1.31			
Lack of Fit	2.21	2	1.11	0.7663	0.5385	not significant
Pure Error	4.34	3	1.45			
Cor Total	53.11	7				

Coefficients	Coded Equation	Real Equation	Actual Equation
Final Equation in Terms of L_Pseudo Components			
Daya Sebar	=		
	+9.79	* A	
	+4.28	* B	
	-11.15	* AB	
The equation in terms of coded factors can be used to make predictions about the response for given levels of each factor. By default, the high levels of the mixture components are coded			

3. Respon viskositas

ANOVA for Cubic model

Response 2: Viskositas

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	5.729E+08	5	1.910E+08	7.63	0.0394	significant
⁽¹⁾ Linear Mixture	9.587E+07	1	9.587E+07	3.83	0.1219	
AB	3.109E+07	1	3.109E+07	1.24	0.3275	
AB(A-B)	4.459E+08	1	4.459E+08	17.82	0.0135	
Residual	1.001E+08	4	2.502E+07			
Lack of Fit	5.737E+07	1	5.737E+07	4.03	0.1384	not significant
Pure Error	4.272E+07	3	1.424E+07			
Cor Total	6.730E+08	7				

B Coefficients Coded Equation Real Equation Actual Equation

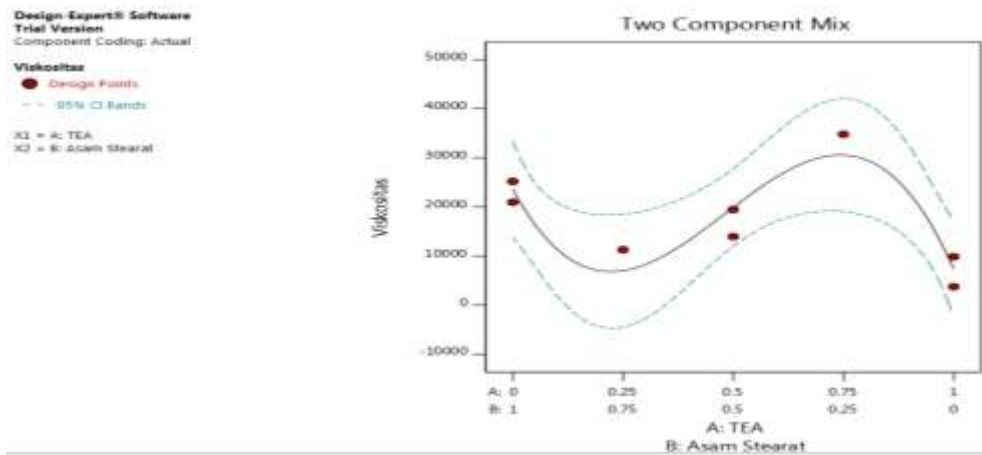
Coefficients in Terms of Coded Factors

Component	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
A-TEA	7330.29	1	3519.67	-2441.88	17102.47	1.55
B-Asam Stearat	23600.29	1	3519.67	13828.12	33372.47	1.55
AB	17665.68	1	15849.17	-26338.48	61670.24	1.96
AB(A-B)	1.689E+05	1	40017.20	57827.77	2.800E+05	1.12

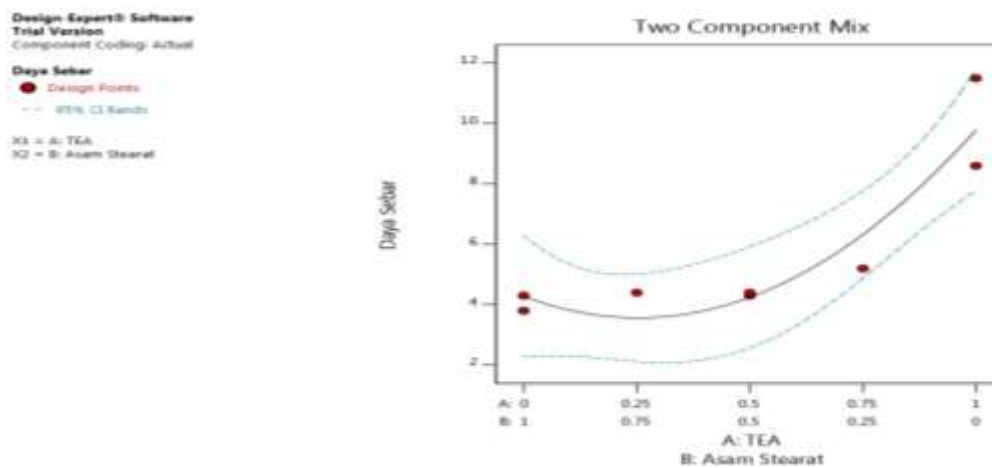
The coefficient estimate represents the expected change in response per unit change in factor value when all remaining factors are held constant. The intercept in an orthogonal design is the overall average response of

Analisa Model Graph pada *design expert* menunjukkan hasil

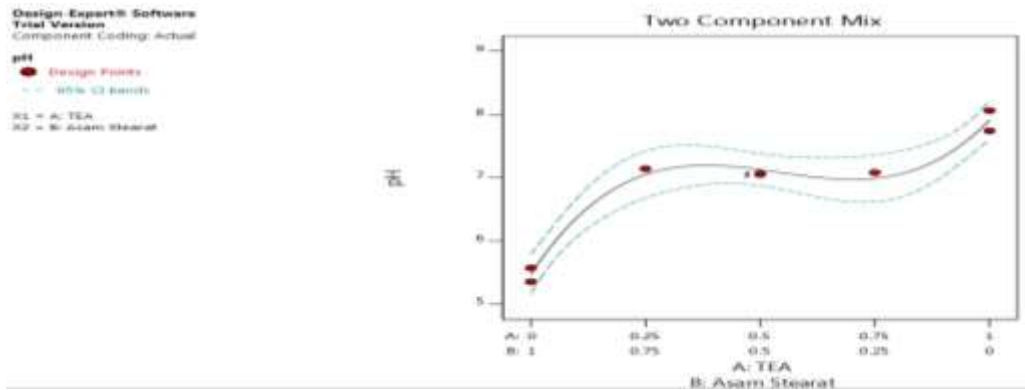
1. Viskositas



2. Daya sebar



3. pH



Keterangan : Perhitungan HLB krim A/M

$$\text{Rumus} = \frac{\text{Gram (A)}}{\text{Gram (A) + Gram (B)}} \times \text{HLB}$$

Keterangan :
A = TEA
B = Asam Stearat

$$\text{TEA} = \frac{3,4}{3,4 + 6,7} \times 12 = 3,96$$

HLB TEA = 12
HLB As. Stearat = 6
(A/M)

$$\text{Asam Stearat} = \frac{6,7}{6,7 + 3,4} \times 6 = 3,96$$

HLB campuran = 3,96 + 3,96 = 7,92 dimana HLB 4-8 merupakan tipe A/M

Perhitungan pengambilan bahan (asam stearat dan TEA)

$$\%Konsentrasi = (fx(\text{batas atas} - \text{batas bawah}) + \text{batas bawah})$$

Formula	Konsentrasi Asam Stearat	Konsentrasi TEA
F1	$\%Konsentrasi = 1 \times (20-1) + 1$ = 20% = 20 gram	$\%Konsentrasi = 0 \times (4-2) + 2$ = 2% = 2 gram
F2	$\%Konsentrasi = 0,25 \times (20-1) + 1$ = 5,75% = 5,75 gram	$\%Konsentrasi = 0,75 \times (4-2) + 2$ = 3,5 = 3,5 gram
F3	$\%Konsentrasi = 0 \times (20-1) + 1$ = 1% = 1gram	$\%Konsentrasi = 1 \times (4-2) + 2$ = 4% = 4 gram
F4	$\%Konsentrasi = 0 \times (20-1) + 1$ = 1% = 1gram	$\%Konsentrasi = 1 \times (4-2) + 2$ = 4% = 4 gram
F5	$\%Konsentrasi = 1 \times (20-1) + 1$ = 20% = 20 gram	$\%Konsentrasi = 0 \times (4-2) + 2$ = 2% = 2 gram
F6	$\%Konsentrasi = 0,5 \times (20-1) + 1$ = 10,5% = 10,5 gram	$\%Konsentrasi = 0,5 \times (4-2) + 2$ = 3 = 3 gram
F7	$\%Konsentrasi = 0,75 \times (20-1) + 1$ = 15,25% = 15,25 gram	$\%Konsentrasi = 0,25 \times (4-2) + 2$ = 2,5 % = 2,5 gram
F8	$\%Konsentrasi = 0,5 \times (20-1) + 1$ = 10,5% = 10,5 gram	$\%Konsentrasi = 0,5 \times (4-2) + 2$ = 3% = 3 gram

Lampiran 5. Verifikasi formula optimum

Keterangan : Hasil analisa SPSS Formula optimum.

```
EXAMINE VARIABLES=a b c
  /PLOT BOXPLOT HISTOGRAM NPPLOT
  /COMPARE GROUP
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.
```

Explore

[DataSet0]

Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
viskositas	3	100.0%	0	.0%	3	100.0%
ph	3	100.0%	0	.0%	3	100.0%
days sebar	3	100.0%	0	.0%	3	100.0%

Descriptives

		Statistic	Std. Error	
viskositas	Mean	3.1240E4	67.73503	
	95% Confidence Interval for Mean	Lower Bound	3.0962E4	
		Upper Bound	3.1488E4	
	5% Trimmed Mean	.		
	Median	3.1240E4		
	Variance	1.000E4		
	Std. Deviation	1.0000E2		
	Minimum	3.11E4		
	Maximum	3.13E4		
	Range	200.00		
	Interquartile Range	.		
Skewness	.000	1.225		
Kurtosis	.			
ph	Mean	6.9867	.00982	
	95% Confidence Interval for Mean	Lower Bound	6.9487	
		Upper Bound	7.0246	
	5% Trimmed Mean	.		
	Median	6.9900		
	Variance	.000		
	Std. Deviation	.01528		
	Minimum	6.97		
	Maximum	7.00		
	Range	.03		
	Interquartile Range	.		
Skewness	-.936	1.225		
Kurtosis	.			
days sebar	Mean	5.7667	.14530	
	95% Confidence Interval for Mean	Lower Bound	5.1415	
		Upper Bound	6.3919	
	5% Trimmed Mean	.		
	Median	5.8000		
	Variance	.063		
	Std. Deviation	.25165		
	Minimum	5.50		
	Maximum	6.00		
	Range	.50		
	Interquartile Range	.		
Skewness	-.588	1.225		
Kurtosis	.			

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
viskositas	.175	3	.	1.000	3	1.000
ph	.263	3	.	.984	3	.837
days sebar	.219	3	.	.987	3	.790

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

formula optimum			
Levene Statistic	df1	df2	Sig.
3.989	2	6	.079

ANOVA

formula optimum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.951E9	2	9.755E8	2.927E5	.000
Within Groups	20000.127	6	3333.355		
Total	1.951E9	8			

```
EXAMINE VARIABLES=a
  /PLOT BOXPLOT STEMLEAF HISTOGRAM NPPLOT
  /COMPARE GROUP
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
  /MISSING LISTWISE
```

```
T-TEST
  /TESTVAL=30111.50
  /MISSING=ANALYSIS
  /VARIABLES=a
  /CRITERIA=CI(.9500).
```

→ T-Test

[DataSet0]

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
viskositas	3	3.0273E4	251.66116	145.29663

One-Sample Test

	Test Value = 30111.50					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
viskositas	1.114	2	.381	161.83333	-463.3276	786.9943

→ T-Test

[DataSet0]

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Daya sebar	3	5.7667	.25166	.14530

One-Sample Test

	Test Value = 5.79246					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Daya sebar	-.178	2	.875	-.02579	-.6510	.5994

→ T-Test

[DataSet0]

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
pH	3	6.9867	.01528	.00882

One-Sample Test

	Test Value = 6.97					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
pH	1.890	2	.199	.01667	-.0213	.0546

Lampiran 6. Analisa Hasil Uji stabilitas formula optimum

1. Viskositas

➔ **Explore**

[DataSet0]

Replikasi

		Case Processing Summary					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Viskositas	Rep 1	5	100.0%	0	.0%	5	100.0%
	Rep 2	5	100.0%	0	.0%	5	100.0%
	Rep 3	5	100.0%	0	.0%	5	100.0%

Descriptives

Replikasi	Statistic	Std. Error
Rep 1	Mean	3.13E4
	95% Confidence Interval for Mean	3.12E4
	Lower Bound	3.14E4
	Upper Bound	3.13E4
	5% Trimmed Mean	3.13E4
	Median	3.13E4
	Variance	9.250E2
	Std. Deviation	96.830
	Minimum	31180
	Maximum	31390
	Range	200
	Interquartile Range	175
	Skewness	-.597
Kurtosis	-2.231	2.000
Rep 2	Mean	3.12E4
	95% Confidence Interval for Mean	3.10E4
	Lower Bound	3.14E4
	Upper Bound	3.12E4
	5% Trimmed Mean	3.12E4
	Median	3.12E4
	Variance	1.925E4
	Std. Deviation	136.993
	Minimum	31040
	Maximum	31390
	Range	350
	Interquartile Range	280
	Skewness	.183
Kurtosis	-.691	2.000
Rep 3	Mean	3.14E4
	95% Confidence Interval for Mean	3.13E4
	Lower Bound	3.15E4
	Upper Bound	3.14E4
	5% Trimmed Mean	3.14E4
	Median	3.14E4
	Variance	9.260E2
	Std. Deviation	96.177
	Minimum	31240
	Maximum	31490
	Range	250
	Interquartile Range	175
	Skewness	-.590
Kurtosis	-.022	2.000

Tests of Normality

Replikasi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Rep 1	.229	5	.200 [*]	.867	5	.254
Rep 2	.159	5	.200 [*]	.990	5	.980
Rep 3	.141	5	.200 [*]	.979	5	.920

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Test of Homogeneity of Variances

Viskositas	Statistic	df1	df2	Sig.
	.635	2	12	.699

ANOVA

Viskositas	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	73000.000	2	36500.000	3.063	.084
Within Groups	143000.000	12	11916.667		
Total	216000.000	14			

Post Hoc

Multiple Comparisons

() Replikasi	() Replikasi	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Rep 1	Rep 2	100.000	69.041	.349	-94.19	294.19
	Rep 3	-70.000	69.041	.693	-254.19	114.19
Rep 2	Rep 1	-100.000	69.041	.349	-294.19	94.19
	Rep 3	-170.000	69.041	.072	-354.19	-14.19
Rep 3	Rep 1	70.000	69.041	.583	-114.19	254.19
	Rep 2	170.000	69.041	.072	-14.19	354.19

2. Daya Sebar

Replikasi

Case Processing Summary							
	Replikasi	Valid		Cases Missing		Total	
		N	Percent	N	Percent	N	Percent
Daya sebar	Rep 1	5	100.0%	0	.0%	5	100.0%
	Rep 2	5	100.0%	0	.0%	5	100.0%
	Rep 3	5	100.0%	0	.0%	5	100.0%

Descriptives							
Daya sebar	Replikasi	Statistic	Std. Error				
Rep 1	Mean	6.0400	.05099				
	95% Confidence Interval for Mean	Lower Bound	5.9904				
		Upper Bound	6.1816				
	5% Trimmed Mean	6.0389					
	Median	6.0000					
	Variance	.013					
	Std. Deviation	.11402					
	Minimum	5.90					
	Maximum	6.20					
	Range	.30					
	Interquartile Range	.20					
	Skewness	.405	.913				
	Kurtosis	-.178	2.000				
	Rep 2	Mean	6.0000	.03162			
95% Confidence Interval for Mean		Lower Bound	5.9122				
		Upper Bound	6.0878				
5% Trimmed Mean		6.0000					
Median		6.0000					
Variance		.006					
Std. Deviation		.07071					
Minimum		5.90					
Maximum		6.10					
Range		.20					
Interquartile Range		.10					
Skewness		.000	.913				
Kurtosis		2.000	2.000				
Rep 3		Mean	6.9400	.05099			
	95% Confidence Interval for Mean	Lower Bound	5.7984				
		Upper Bound	6.0816				
	5% Trimmed Mean	5.9389					
	Median	6.9000					
	Variance	.013					
	Std. Deviation	.11402					
	Minimum	5.80					
	Maximum	6.10					
	Range	.30					
	Interquartile Range	.20					
	Skewness	.405	.913				
	Kurtosis	-.178	2.000				

Tests of Normality							
Daya sebar	Replikasi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	Rep 1	.237	5	.200*	.961	5	.814
	Rep 2	.300	5	.161	.883	5	.325
	Rep 3	.237	5	.200*	.961	5	.814

a. Lilliefors Significance Correction
*. This is a lower bound of the true significance.

Oneway

[DataSet0]

Descriptives								
Daya sebar	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Rep 1	5	6.0400	.11402	.05099	5.8984	6.1816	5.90	6.20
Rep 2	5	6.0000	.07071	.03162	5.9122	6.0878	5.90	6.10
Rep 3	5	6.9400	.11402	.05099	5.7984	6.0816	5.80	6.10
Total	15	6.9933	.10328	.02667	5.9361	6.0505	5.80	6.20

Test of Homogeneity of Variances				
Daya sebar	Levene Statistic	df1	df2	Sig.
	1.195	2	12	.326

ANOVA					
Daya sebar	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.025	2	.013	1.226	.329
Within Groups	.124	12	.010		
Total	.149	14			

Post Hoc

Multiple Comparisons

Daya sebar
Tukey HSD

(I) Repli- kasi	(J) Repli- kasi	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Rep 1	Rep 2	.04000	.06429	.911	-.1315	.2115
	Rep 3	-.10000	.06429	.301	-.0715	.2715
Rep 2	Rep 1	-.04000	.06429	.911	-.2115	.1315
	Rep 3	-.06000	.06429	.631	-.1115	.2315
Rep 3	Rep 1	-.10000	.06429	.301	-.2715	.0715
	Rep 2	-.06000	.06429	.631	-.2315	.1115

3. pH

Replikasi

Case Processing Summary

pH	Replikasi	Valid		Cases Missing		Total	
		N	Percent	N	Percent	N	Percent
pH	rep 1	5	100.0%	0	.0%	5	100.0%
	rep 2	5	100.0%	0	.0%	5	100.0%
	rep 3	5	100.0%	0	.0%	5	100.0%

Descriptives

pH	Replikasi	Statistic		Std. Error
		Mean	Lower Bound	
pH	rep 1	Mean	7.0020	.01630
		95% Confidence Interval for Mean	Lower Bound	6.9856
		95% Confidence Interval for Mean	Upper Bound	7.0184
		5% Trimmed Mean		7.0000
		Median		6.9900
		Variance		.001
		Std. Deviation		.03421
		Minimum		6.97
		Maximum		7.05
		Range		.08
		Interquartile Range		.05
		Skewness		1.664
		Kurtosis		2.229
pH	rep 2	Mean	7.0000	.01342
		95% Confidence Interval for Mean	Lower Bound	6.9820
		95% Confidence Interval for Mean	Upper Bound	7.0172
		5% Trimmed Mean		6.9900
		Median		6.9800
		Variance		.001
		Std. Deviation		.03000
		Minimum		6.97
		Maximum		7.05
		Range		.08
		Interquartile Range		.04
		Skewness		1.481
		Kurtosis		2.526
pH	rep 3	Mean	6.9920	.00374
		95% Confidence Interval for Mean	Lower Bound	6.9818
		95% Confidence Interval for Mean	Upper Bound	7.0024
		5% Trimmed Mean		6.9822
		Median		6.9800
		Variance		.000
		Std. Deviation		.00937
		Minimum		6.98
		Maximum		7.00
		Range		.02
		Interquartile Range		.01
		Skewness		-.512
		Kurtosis		2.000

Oneway

[DataSet0]

Descriptives

pH		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
pH	rep 1	5	7.0020	.03421	.01630	6.9856	7.0184	6.97	7.05
	rep 2	5	7.0000	.03000	.01342	6.9820	7.0172	6.97	7.05
	rep 3	5	6.9920	.00937	.00374	6.9818	7.0024	6.98	7.00
	Total	15	6.9980	.02513	.00649	6.9841	7.0119	6.97	7.05

Test of Homogeneity of Variances

pH	Levene Statistic	df1	df2	Sig.
pH	1.303	2	12	.308

ANOVA

pH		Sum of Squares	df	Mean Square	F	Sig.
pH	Between Groups	.000	2	.000	.196	.924
	Within Groups	.009	12	.001		
	Total	.009	14			

Post Hoc

Multiple Comparisons

pH
Tukey HSD

(I) Repli- kasi	(J) Repli- kasi	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
rep 1	rep 2	-.00200	.01699	.992	-.0431	.0471
	rep 3	-.01000	.01699	.827	-.0361	.0561
rep 2	rep 1	.00200	.01699	.992	-.0471	.0431
	rep 3	-.00800	.01699	.885	-.0371	.0521
rep 3	rep 1	.01000	.01699	.827	-.0561	.0361
	rep 2	.00800	.01699	.885	-.0521	.0371

Lampiran 7. Analisis Hasil Uji Iritasi

Kelompok	Kelinci	24 Jam		48 Jam		72 Jam	
		Eritema	Edema	Eritema	Edema	Eritema	Edema
Kontrol Positif	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0
Formula Optimum	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0
Basis Krim	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0
Ekstrak	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0
Kontrol Sehat	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0

Keterangan : Tebal Lipat Kulit

Kelinci	24 Jam	48 Jam	72 Jam
1	0,43 Cm	0,43 Cm	0,43 Cm
2	0,42 Cm	0,42 Cm	0,42 Cm
3	0,37 Cm	0,37 Cm	0,37 Cm
4	0,39 Cm	0,39 Cm	0,39 Cm
5	0,40 Cm	0,40 Cm	0,40 Cm
6	0,39 Cm	0,39 Cm	0,39 Cm

1. Kelompok Sehat

$$\text{Kelinci 1 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 2 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 3 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 4 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 5 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 6 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Rata-rata} = 0$$

2. Kelompok Basis

$$\text{Kelinci 1 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 2 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 3 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 4 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 5 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 6 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Rata-rata} = 0$$

3. Kelompok Ekstrak

$$\text{Kelinci 1 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 2 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 3 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 4 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 5 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 6 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Rata-rata} = 0$$

4. Kelompok Formula 5%

$$\text{Kelinci 1 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 2 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 3 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 4 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 5 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 6 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Rata-rata} = 0$$

5. Kelompok control Positif

$$\text{Kelinci 1 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 2 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 3 } \left(\frac{0-0}{4} \right) = 0$$











$$\text{Kelinci 4 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 5 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Kelinci 6 } \left(\frac{0-0}{4} \right) = 0$$

$$\text{Rata-rata} = 0$$

Lampiran 8. Analisis kelinci dengan pembanding

Kelinci	Gambar Penelitian	Gambar Pembanding
1.		 <p>IR Irritant Reaction</p> <ul style="list-style-type: none"> Discrete patchy erythema without infiltration.
2.		 <p>IR Irritant Reaction</p> <ul style="list-style-type: none"> Discrete patchy erythema without infiltration.
3.		 <p>IR Irritant Reaction</p> <ul style="list-style-type: none"> Discrete patchy erythema without infiltration.
4.		 <p>IR Irritant Reaction</p> <ul style="list-style-type: none"> Discrete patchy erythema without infiltration.
5.		 <p>IR Irritant Reaction</p> <ul style="list-style-type: none"> Discrete patchy erythema without infiltration.

Oneway

[DataSet0]

Test of Homogeneity of Variances

Uji Iritasi

Levene Statistic	df1	df2	Sig.
.	4	.	.

ANOVA

Uji Iritasi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	.	.
Within Groups	.000	25	.000		
Total	.000	29			

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sehat	6	100.0%	0	.0%	6	100.0%
KP	6	100.0%	0	.0%	6	100.0%
Ekstrak	6	100.0%	0	.0%	6	100.0%
Basis	6	100.0%	0	.0%	6	100.0%
Ekstrak 5%	6	100.0%	0	.0%	6	100.0%

Descriptives^{a, b, c, d, e}

- a. Sehat is constant. It has been omitted.
 b. KP is constant. It has been omitted.
 c. Ekstrak is constant. It has been omitted.
 d. Basis is constant. It has been omitted.
 e. Ekstrak 5% is constant. It has been omitted.

Tests of Normality^{a, b, c, d, e}

- a. Sehat is constant. It has been omitted.
 b. KP is constant. It has been omitted.
 c. Ekstrak is constant. It has been omitted.
 d. Basis is constant. It has been omitted.
 e. Ekstrak 5% is constant. It has been omitted.

NPAR TESTS

/K-S=Hsig=11 BY Kelompok (1 5)
 /MISSING ANALYSIS.

NPar Tests

[DataSet0]

Kruskal-Wallis

Ranks


		punggung	
Iritasi		N	Mean Rank
	Sehat	6	15.50
	KP	6	15.50
	Ekstrak	6	15.50
	Basis	6	15.50
	Ekstrak 5%	6	15.50
	Total	30	

Test Statistics^{a, b}

	Iritasi
Chi-Square	.000
df	4
Asymp. Sig.	1.000

- a. Kruskal-Wallis Test
 b. Grouping Variable: punggung

Lampiran 9. Identifikasi Hewan Uji


PETERNAKAN KELINCI
AZA AKMAL RABBIT FARM
 Jl. H. Mutoha RT 01 / RW 04 Pegandon Kendal (CP : 0832909345281)

SURAT KETERANGAN
 No. 002 / ARF / IV / 2019

Yang bertanda tangan di bawah ini

Nama : Yuni Warniyati, ST

Alamat : Jl. H. Mutoha RT 01 RW 04 Pegandon Kendal

Menerangkan bahwa

Nama : Novi Rovita

NIM : 33101560392

Institusi : Program Studi S1 Farmasi Universitas Sultan Agung Semarang

Pada bulan April 2019 telah membeli Kelinci (*Oryctolagus cuniculus*) dengan taksonomi sebagai berikut:

Kingdom : Animalia

Phylum : Chordata

Subphylum : Vertebrata

Classis : Mamalia

Ordo : Lagomorpha



Familia : Leporidae

Genus : *Oryctolagus*

Species : *Oryctolagus cuniculus* (Linnaeus, 1758)

Demikian Surat Keterangan ini dibuat, semoga dapat digunakan sebagaimana mestinya.

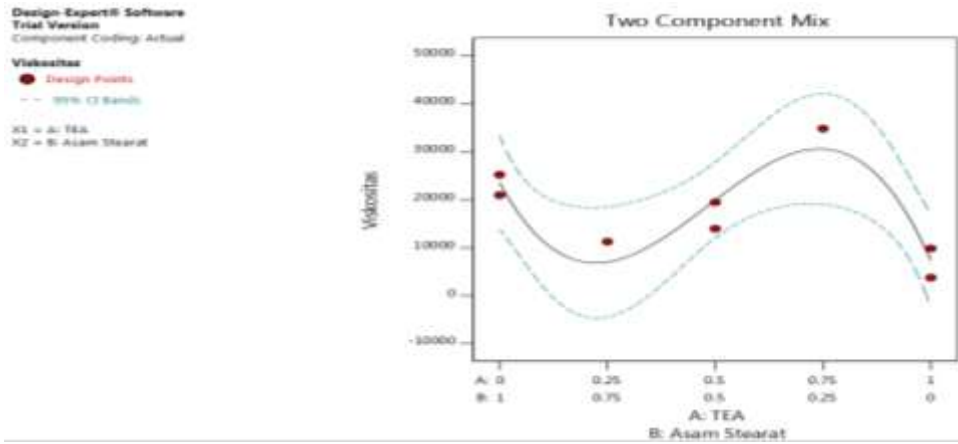
Kendal, April 2019



 AZA AKMAL RABBIT FARM
 Jl. H. Mutoha RT 01 RW 04 Pegandon Kendal

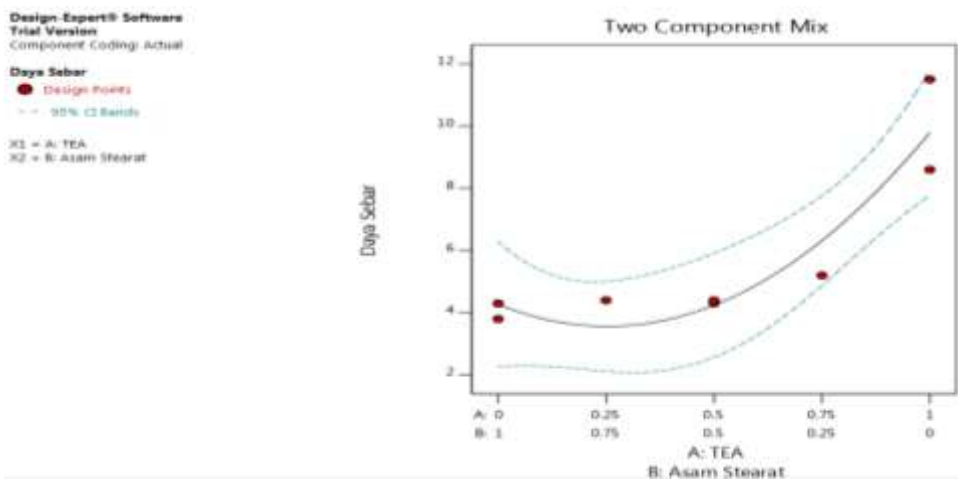
Yuni Warniyati, ST

Lampiran 10. Analisa Model Graph pada design expert menunjukkan hasil

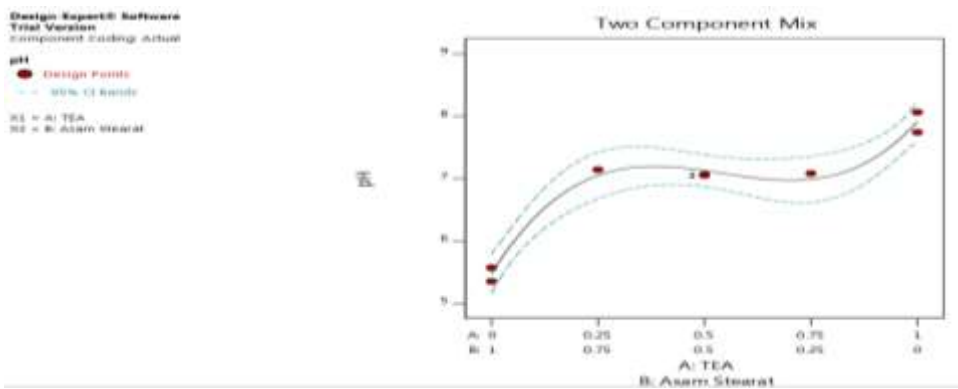
4. Viskositas



5. Daya sebar



6. pH



Lampiran 11. Ethical Clearance

KOMISI BIOETIKA PENELITIAN KEDOKTERAN/KESEHATAN
FAKULTAS KEDOKTERAN
UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG
 Sekretariat : Gedung C Lantai 1 Fakultas Kedokteran Unissula
 J. Raya Kaligawe Km 4 Semarang, Telp. 024-6583584, Fax 024-6594366

Ethical Clearance

No. 268/V/2010/Komisi Bioetik

Komisi Bioetika Penelitian Kedokteran/Kesehatan Fakultas Kedokteran Universitas Islam Sultan Agung Semarang, setelah melakukan pengkajian atas usulan penelitian yang berjudul :

OPTIMASI FORMULA, UJI STABILITAS FISIK, DAN UJI IRRITASI SEDIAAN KRIM EKSTRAK DAUN KELOR (*Moringa oleifera* L.) PADA KELINCI ALBINO (*Oryctolagus cuniculus*)

Peneliti Utama : Now Rovita
 Pembimbing : Fadriil Latifati, M.Sc., Apt
 Meli Pranata, M.Farm., Apt
 Tempat Penelitian : Laboratorium Farmasi FK Unissula

dengan ini menyatakan bahwa usulan penelitian diatas telah memenuhi prasyarat etik penelitian. Oleh karena itu Komisi Bioetika merekomendasikan agar penelitian ini dapat dilaksanakan dengan mempertimbangkan prinsip-prinsip yang dinyatakan dalam Deklarasi Helsinki dan panduan yang terdapat dalam Pedoman Nasional Etik Penelitian Kesehatan (PNEPK) Departemen Kesehatan RI tahun 2004.

Semarang, 8 Mei 2010
 Komisi Bioetika Penelitian Kedokteran/Kesehatan
 Fakultas Kedokteran Unissula


 (dr. Sitwan Dahlan, Sp.F(K))

Lampiran 12. Dokumentasi Penelitian

Penimbangan
Simplisia Kering



Penimbangan
Simplisia Halus



Maserasi



Penyaringan



Rotary Evaporator



Ekstrak Kental



Uji Kadar Air



Kontrol Positif



Uji Homogenitas



Uji Viskositas



Uji pH meter



Uji Daya Sebar



Kandang Kelinci



Pembungkus Punggung Kelinci



Pengolesan Punggung Kelinci



Pengamatan Eritema & Edema Setelah 4 jam



Pengamatan Eritema & Edema setelah 24 jam



Pengamatan Eritema & edema setelah 24 jam



Pengamatan Eritema & edema setelah 72 jam



Pengukuran tebal lipatan tebal lipatan kulit kelinci