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Lampiran 1. Hasil determinasi tanaman bunga kecombrang



KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
BADAN KEBIJAKAN PEMBANGUNAN KESEHATAN

BALAI BESAR PENELITIAN DAN PENGEMBANGAN
 TANAMAN OBAT DAN OBAT TRADISIONAL

Jalan Lawu No. 11 Tawangmangu, Karanganyar, Jawa Tengah 57792
 Telepon (0271) 697 010 Faksimile (0271) 697 451

Laman b2p2toot.litbang.kemkes.go.id Surat Elektronik b2p2toot@litbang.kemkes.go.id



Nomor : KM.04.02/2/1683/2022
 Hal : Keterangan Determinasi

14 September 2022

Yth. Dekan Fakultas Farmasi
 Universitas Setia Budi
 Jalan Let. Jend. Sutoyo
 Solo 57127

Merujuk surat Saudara nomor: 941/H6-04/25.08.2022 tanggal 25 Agustus 2022 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Shelin Wulandari
 Nama Sampel : Kecombrang
 Sampel : Tanaman Segar dan Foto Bunga
 Spesies : *Etlingera elatior* (Jack) R.M.Sm.
 Sinonim : *Nicolaia elatior* (Jack) Horan.
 Familia : Zingiberaceae
 Penanggung Jawab : Nina Kurnianingrum, S.Si.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke dan/atau berasal dari B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

Kepala Balai Besar Penelitian dan
 Pengembangan Kesehatan Tanaman Obat
 dan Obat Tradisional Tawangmangu,



Akhmad Saikhu, S.KM., M.Sc.PH

Lampiran 2. Surat Ethical clearance

10/25/22, 1:03 PM

KEPK-RSDM



HEALTH RESEARCH ETHICS COMMITTEE KOMISI ETIK PENELITIAN KESEHATAN

Dr. Moewardi General Hospital
RSUD Dr. Moewardi

ETHICAL CLEARANCE KELAIKAN ETIK

Nomor : 1.310 / X / HREC / 2022

The Health Research Ethics Committee Dr. Moewardi
Komisi Etik Penelitian Kesehatan RSUD Dr. Moewardi

after reviewing the proposal design, herewith to certify
setelah menilai rancangan penelitian yang diusulkan, dengan ini menyatakan

That the research proposal with topic :
Bahwa usulan penelitian dengan judul

UJI AKTIVITAS SEDIAAN KRIM EKSTRAK BUNGA KECOMBRANG (*Etlingera elatior* (Jack) R.M. Smith) TERHADAP PENYEMBUHAN LUKA BAKAR PADA KELINCI (*Oryctolagus cuniculus*).

Principal investigator
Peneliti Utama : Shelin Wulandari
25195973A

Location of research
Lokasi Tempat Penelitian : Universitas Setia Budi Surakarta

Is ethically approved
Dinyatakan layak etik

Issued on : 25 Oktober 2022
Chairman
Ketua

Dr. Wahyu Dwi Almoko, Sp.F
19770224-201001 1 004

Lampiran 4. Gambar alat dan bahan penelitian

Gambar cawan porselin

Gambar mortir dan
stamper

Gambar gelas ukur



Gambar beaker glass

Gambar timbangan
analitik

Lampiran 5. Pembuatan serbuk dan ekstrak bunga kecombrang



Bunga kecombrang



Pencucian bunga



Perajangan bunga



Pengeringan bunga



Bunga kering



Serbuk bunga



Pengayakan serbuk



Maserasi kecombrang



Hasil filtrat maserasi

Lampiran 6. Perhitungan rendemen

1. Hasil perhitungan rendemen serbuk

Berat basah (g)	Berat kering (g)	Rendemen (%)
18000	1100	6,1%

Perhitungan rendemen simplisia :

$$\text{Rendemen} = \frac{\text{berat kering}}{\text{berat basah}} \times 100\%$$

$$\text{Rendemen} = \frac{1100 \text{ gram}}{18000 \text{ gram}} \times 100\%$$

$$\text{Rendemen} = 6,1\%$$

2. Hasil perhitungan rendemen berat serbuk terhadap berat bunga kering

Berat kering (g)	Berat serbuk (g)	Rendemen (%)
1100	900	81,81%

Perhitungan rendemen :

$$\text{Rendemen} = \frac{\text{berat serbuk}}{\text{berat kering}} \times 100\%$$

$$\text{Rendemen} = \frac{900 \text{ gram}}{1100 \text{ gram}} \times 100\%$$

$$\text{Rendemen} = 81,81\%$$

Berat serbuk (g)	Berat ekstrak (g)	Rendemen (%)
700	214	30,57%

3. Hasil perhitungan rendemen ekstrak bunga kecombrang

Perhitungan rendemen :

$$\text{Rendemen} = \frac{\text{berat ekstrak}}{\text{berat serbuk}} \times 100\%$$

$$\text{Rendemen} = \frac{214 \text{ gram}}{700 \text{ gram}} \times 100\%$$

$$\text{Rendemen} = 30,57\%$$

Lampiran 7. Hasil penetapan susut pengeringan serbuk bunga kecombrang

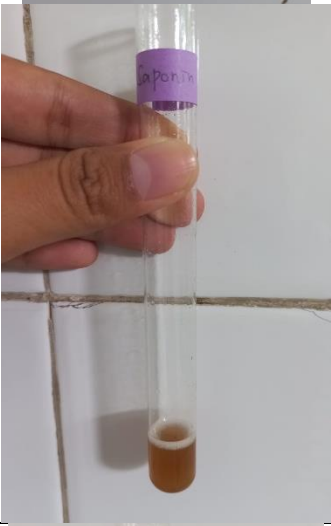
	Berat (g)	Susut pengeringan (%)	Pustaka (%) (Kemenkes RI, 2017)
Replikasi 1	1,0	9,52	Memenuhi syarat < 10%
Replikasi 2	1,0	9,54	
Replikasi 3	1,0	9,5	
Rata-rata $\pm$ SD		9,52 $\pm$ 0,02	
Perhitungan = $\frac{9,52+9,54+9,5}{3}=9,52\%$			

Rata-rata susut pengeringan serbuk bunga kecombrang adalah 9,52%.

Lampiran 8. Hasil penetapan kadar air serbuk bunga kecombrang



Lampiran 9. Hasil identifikasi kandungan kimia ekstrak bunga kecombrang

Kandungan senyawa	Hasil
Flavonoid	
Saponin	
Tannin	

Steroid/terpenoid



Lampiran 10. Perhitungan formula krim

Formula 0

$$\text{Setil alkohol} = \frac{4 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 4 \text{ gram}$$

$$\text{Asam stearate} = \frac{12,5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 12,5 \text{ gram}$$

$$\text{Trietanolamin} = \frac{1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 1 \text{ gram}$$

$$\text{Gliserin} = \frac{8 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 8 \text{ gram}$$

$$\text{Metil paraben} = \frac{0,1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,1 \text{ gram}$$

$$\text{Propil paraben} = \frac{0,05 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,05 \text{ gram}$$

$$\text{Aquadest ad} = 100 - 25,65 = 74,35 \text{ gram}$$

Formula I

$$\text{Ekstrak bunga kecombrang} = \frac{5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 5 \text{ gram}$$

$$\text{Setil alkohol} = \frac{4 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 4 \text{ gram}$$

$$\text{Asam stearat} = \frac{10 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 10 \text{ gram}$$

$$\text{Trietanolamin} = \frac{0,5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,5 \text{ gram}$$

$$\text{Gliserin} = \frac{8 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 8 \text{ gram}$$

$$\text{Metil paraben} = \frac{0,1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,1 \text{ gram}$$

$$\text{Propil paraben} = \frac{0,05 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,05 \text{ gram}$$

$$\text{Aquadest ad} = 100 - 27,65 = 72,35 \text{ gram}$$

Formula II

$$\begin{aligned}
\text{Ekstrak bunga kecombrang} &= \frac{5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 5 \text{ gram} \\
\text{Setil alkohol} &= \frac{4 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 4 \text{ gram} \\
\text{Asam stearat} &= \frac{12,5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 12,5 \text{ gram} \\
\text{Trietanolamin} &= \frac{1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 1 \text{ gram} \\
\text{Gliserin} &= \frac{8 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 8 \text{ gram} \\
\text{Metil paraben} &= \frac{0,1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,1 \text{ gram} \\
\text{Propil paraben} &= \frac{0,05 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,05 \text{ gram} \\
\text{Aquadest ad} &= 100 - 30,65 = 69,35 \text{ gram}
\end{aligned}$$

Formula III

$$\begin{aligned}
\text{Ekstrak bunga kecombrang} &= \frac{5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 5 \text{ gram} \\
\text{Setil alkohol} &= \frac{4 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 4 \text{ gram} \\
\text{Asam stearat} &= \frac{15 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 15 \text{ gram} \\
\text{Trietanolamin} &= \frac{1,5 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 1,5 \text{ gram} \\
\text{Gliserin} &= \frac{8 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 8 \text{ gram} \\
\text{Metil paraben} &= \frac{0,1 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,1 \text{ gram} \\
\text{Propil paraben} &= \frac{0,05 \text{ gram}}{100 \text{ gram}} \times 100 \text{ gram} = 0,05 \text{ gram} \\
\text{Aquadest ad} &= 100 - 33,65 = 66,35 \text{ gram}
\end{aligned}$$

Lampiran 11. Hasil gambar krim

Gambar sediaan krim

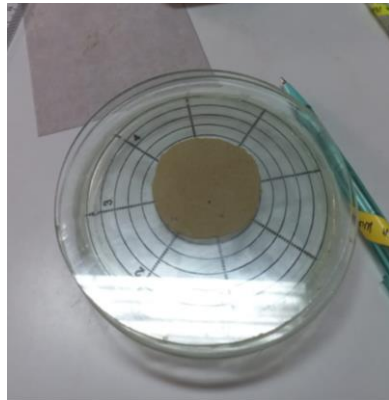
Lampiran 12. Hasil gambar pengujian sifat fisik krim

1. Uji daya lekat



Gambar alat daya lekat

2. Uji daya sebar



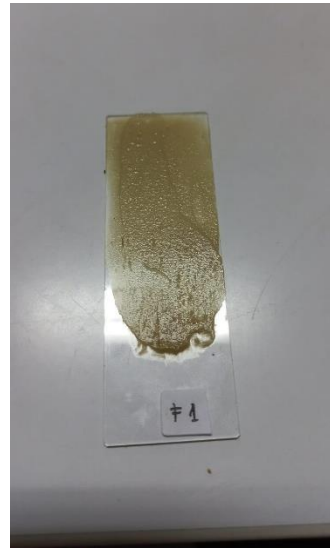
Gambar alat daya sebar



3. Uji homogenitas



(F0 Kontrol negatif)



(F1 20:1)



(F2 25:2)



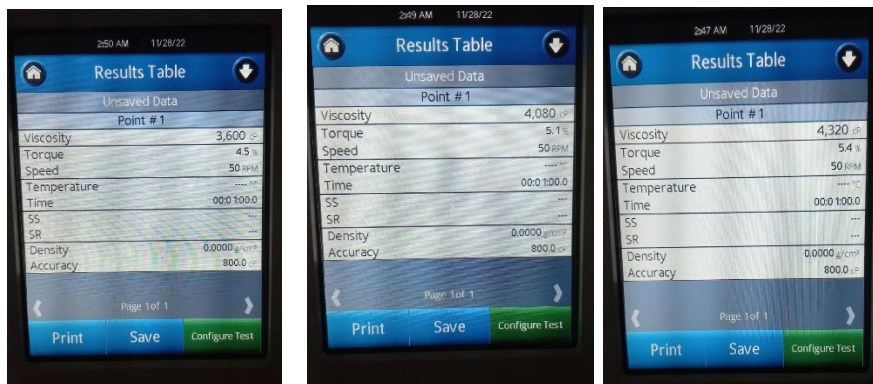
(F3 30:3)

4. Uji pH



Gambar uji pH

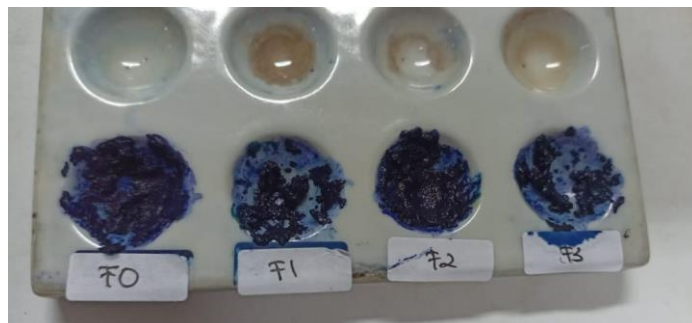
5. Uji viskositas



Gambar uji viskositas

6. Uji tipe krim

a. Pewarnaan dengan methylen blue



b. Pengenceran dengan air



c. Daya hantar listrik



7. Uji stabilitas *Cycling test*



Siklus pertama



Siklus ke-2



Siklus ke-3



Siklus ke-4



Siklus ke-5



Siklus ke-6

Lampiran 13. Hasil SPSS pengujian mutu fisik

1. Uji daya sebar

Normality

One-Sample Kolmogorov-Smirnov Test

		Uji_dayasebar_ krim
N		60
Normal Parameters ^{a,b}	Mean	3.7630
	Std. Deviation	.53892
Most Extreme Differences	Absolute	.103
	Positive	.103
	Negative	-.062
Test Statistic		.103
Asymp. Sig. (2-tailed)		.185 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Homogeneity

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Uji_dayasebar_krim	Based on Mean	2.698	3	56	.054
	Based on Median	2.014	3	56	.122
	Based on Median and with adjusted df	2.014	3	50.033	.124
	Based on trimmed mean	2.678	3	56	.056

One-way Anova

ANOVA

Uji_dayasebar_krim

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.497	3	1.499	6.641	.001
Within Groups	12.639	56	.226		
Total	17.136	59			

2. Uji daya lekat

Normality

One-Sample Kolmogorov-Smirnov Test

		Uji_dayalekat_krim
N		12
Normal Parameters ^{a,b}	Mean	2.4550
	Std. Deviation	.37044
Most Extreme Differences	Absolute	.204
	Positive	.195
	Negative	-.204
Test Statistic		.204
Asymp. Sig. (2-tailed)		.181 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Homogeneity

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Uji_dayalekat_krim	Based on Mean	.305	3	8	.822
	Based on Median	.241	3	8	.866
	Based on Median and with adjusted df	.241	3	7.747	.865
	Based on trimmed mean	.303	3	8	.822

One way anova

ANOVA

Uji_dayalekat_krim

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.223	3	.074	.461	.717
Within Groups	1.287	8	.161		
Total	1.509	11			

3. Uji pH

Normality

One-Sample Kolmogorov-Smirnov Test

Uji_pH_krim		
N		12
Normal Parameters ^{a,b}	Mean	6.5392
	Std. Deviation	.18123
Most Extreme Differences	Absolute	.232
	Positive	.232
	Negative	-.136
Test Statistic		.232
Asymp. Sig. (2-tailed)		.074 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Homogeneity

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Uji_pH_krim	Based on Mean	1.095	3	8	.406
	Based on Median	.411	3	8	.750
	Based on Median and with adjusted df	.411	3	6.336	.751
	Based on trimmed mean	1.034	3	8	.428

One-way Anova

ANOVA

Uji_pH_krim

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.260	3	.087	6.835	.013
Within Groups	.101	8	.013		
Total	.361	11			

Uji stabilitas pH

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	sebelum cycling - sesudah cycling	.05167	.01503	.00752	.02775	.07558	6.875	3	.006

4. Uji viskositas

Normality

One-Sample Kolmogorov-Smirnov Test

		Uji_viskositas_krim
N		12
Normal Parameters ^{a,b}	Mean	9.1933
	Std. Deviation	6.33361
Most Extreme Differences	Absolute	.215
	Positive	.215
	Negative	-.189
Test Statistic		.215
Asymp. Sig. (2-tailed)		.132 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Homogeneity

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Uji_viskositas_krim	Based on Mean	1.628	3	8	.258
	Based on Median	1.084	3	8	.409
	Based on Median and with adjusted df	1.084	3	4.818	.438
	Based on trimmed mean	1.595	3	8	.265

One-way Anova

ANOVA

Uji_viskositas_krim

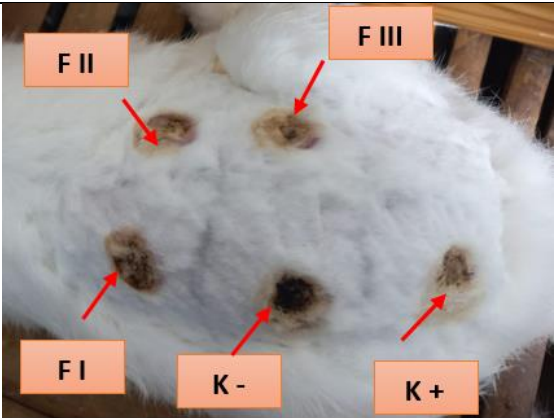
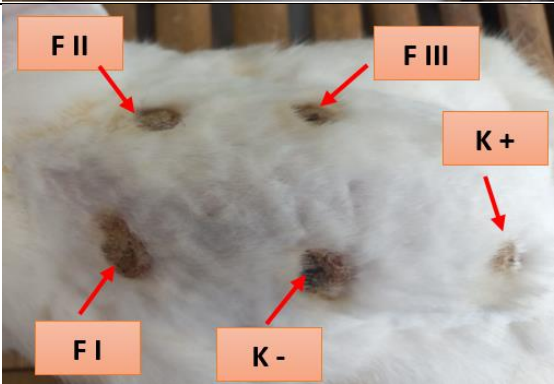
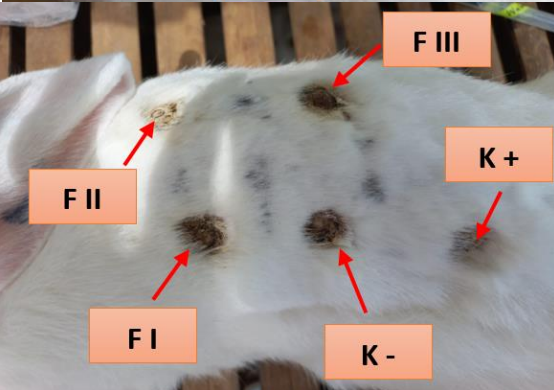
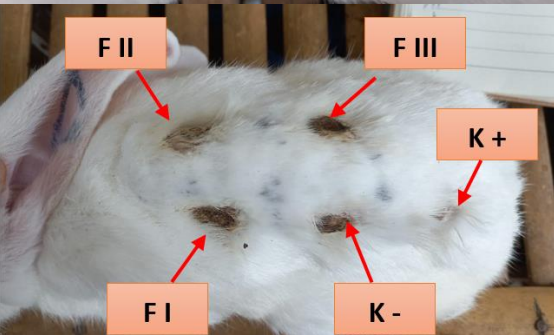
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	429.420	3	143.140	96.716	.000
Within Groups	11.840	8	1.480		
Total	441.260	11			

Uji stabilitas viskositas

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	sebelum cycling - sesudah cycling	.06025	.06296	.03148	-.03994	.16044	1.914	3	.152

Lampiran 14. Gambar perlakuan hewan uji

Keterangan	Gambar
Luka hari ke 1	
Luka hari ke 7	
Luka hari ke 14	
Luka hari ke 21	

Sembuh



Lampiran 15. Diameter penyembuhan luka bakar

Hari	Kontrol Positif				Kontrol Negatif				Formula I				Formula II				Formula III			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	1,25	1,275	1,2	1,3	1,175	1,125	1,175	1,225	1,2	1,25	1,175	1,275	1,15	1,15	1,125	1,175	1,15	1,175	1,15	1,15
2	1,25	1,275	1,2	1,3	1,175	1,125	1,175	1,2	1,2	1,25	1,15	1,25	1,15	1,15	1,125	1,175	1,15	1,175	1,15	1,15
3	1,225	1,25	1,225	1,275	1,175	1,075	1,175	1,2	1,2	1,25	1,175	1,175	1,15	1,15	1,125	1,175	1,15	1,175	1,15	1,15
4	1,15	1,175	1,2	1,25	1,15	1,075	1,175	1,2	1,175	1,225	1,175	1,175	1,125	1,15	1,125	1,175	1,125	1,175	1,15	1,15
5	1,125	1,15	1,15	1,25	1,15	1,075	1,175	1,2	1,175	1,175	1,15	1,225	1,1	1,15	1,125	1,175	1,125	1,15	1,125	1,15
6	1,075	1,15	1,125	1,225	1,125	1,075	1,15	1,2	1,15	1,15	1,125	1,175	1,075	1,15	1,075	1,125	1,1	1,15	1,125	1,15
7	1,05	1,1	1,1	1,15	1,125	1,075	1,125	1,175	1,125	1,075	1,075	1,15	1,025	1,075	1,025	1,05	1,05	1,1	1,075	1,075
8	0,975	1,05	1,05	1,1	1,15	1,05	1,125	1,15	1,1	1,025	1,025	1,1	1	1,075	1	1	0,925	1,025	1,05	1,05
9	0,925	0,975	1,025	1,075	1,125	1,05	1,1	1,15	1,05	1,025	0,975	1,075	0,975	1,025	0,95	0,975	0,875	0,925	1,025	1
10	0,85	0,925	1,025	1,025	1,025	0,925	1,075	1,1	0,95	0,95	0,9	1,025	0,85	0,975	0,9	0,85	0,8	0,9	0,975	0,925
11	0,8	0,85	0,925	0,975	0,95	0,95	1,05	1,1	0,925	0,925	0,875	0,95	0,825	0,925	0,875	0,825	0,8	0,85	0,95	0,9
12	0,7	0,825	0,875	0,9	0,9	0,95	1,025	0,95	0,925	0,85	0,875	0,925	0,775	0,875	0,8	0,775	0,775	0,85	0,925	0,8
13	0,575	0,75	0,825	0,575	0,9	0,85	0,925	0,95	0,85	0,8	0,8	0,85	0,7	0,8	0,75	0,75	0,75	0,825	0,85	0,75
14	0,45	0,675	0,7	0,675	0,85	0,825	0,875	0,9	0,825	0,775	0,75	0,825	0,65	0,7	0,7	0,65	0,7	0,625	0,825	0,725
15	0,325	0,575	0,55	0,55	0,825	0,8	0,8	0,85	0,775	0,7	0,675	0,725	0,6	0,65	0,625	0,575	0,55	0,525	0,825	0,625
16	0	0,425	0,45	0,325	0,75	0,725	0,75	0,775	0,6	0,55	0,625	0,7	0,55	0,575	0,6	0,525	0,475	0,45	0,825	0,575
17	0	0,275	0,25	0	0,575	0,625	0,65	0,7	0,55	0,525	0,575	0,675	0,45	0,5	0,55	0,475	0,475	0,35	0,675	0,55
18	0	0	0	0	0,525	0,55	0,625	0,55	0,55	0,475	0,55	0,55	0,35	0,3	0,525	0,375	0,3	0,25	0,575	0,475
19	0	0	0	0	0,45	0,45	0,525	0,55	0,45	0,275	0,45	0,5	0	0	0,3	0,225	0	0	0,475	0,425
20	0	0	0	0	0,375	0,425	0,45	0,475	0,325	0	0,325	0,325	0	0	0	0	0	0	0,4	0
21	0	0	0	0	0,35	0,35	0,4	0,425	0	0	0,3	0	0	0	0	0	0	0	0,275	0
22	0	0	0	0	0,25	0,25	0,35	0,35	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0,225	0,225	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lampiran 16. Persentase kesembuhan luka bakar

Hari ke	Persentase kesembuhan luka bakar (%)				
	Kontrol positif	Kontrol negatif	Formula I	Formula II	Formula III
ke-1	0	0	0	0	0
ke-2	0,00	1,00999584	2,02	0,00	0,00
ke-3	1,86	3,18	3,77	0,00	0,00
ke-4	9,49	4,24	5,79	1,08	1,08
ke-5	13,34	4,24	6,92	2,13	3,20
ke-6	17,00	6,32	11,73	7,41	4,25
ke-7	23,18	8,34	18,27	17,58	13,56
ke-8	30,79	9,32	24,55	21,39	23,12
ke-9	36,36	11,36	29,06	27,13	29,70
ke-10	41,50	22,99	39,07	39,29	37,09
ke-11	49,73	25,71	43,71	43,51	37,59
ke-12	56,42	33,45	46,56	50,66	38,90
ke-13	69,35	40,53	54,52	57,34	38,00
ke-14	74,51	46,11	57,92	65,42	43,81
ke-15	83,50	51,41	65,40	71,50	51,97
ke-16	92,14	59,24	74,30	75,92	54,63
ke-17	97,74	70,48	77,34	81,39	61,58
ke-18	100	76,92	80,58	87,89	71,30
ke-19	100	81,92	87,03	97,30	83,68
ke-20	100	85,96	94,34	100	92,16
ke-21	100	89,10	98,30	100	94,47
ke-22	100	93,12	100,00	100	100,00
ke-23	100	98,16	100	100	100
ke-24	100	100,00	100	100	100

Lampiran 17. Perhitungan persentase penyembuhan luka

Rumus :

$$P_x = \frac{(dx1)^2 - (dxn)^2}{(dx1)^2} \times 100\%$$

Keterangan :

Px = persentase penyembuhan luka bakar pada hari ke-x

dx1 = diameter luka bakar pada hari pertama

dxn = diameter luka bakar hari ke-n.

1. Hari ke-7 kontrol positif $= \frac{(1,25)^2 - (1,05)^2}{(1,25)^2} \times 100\% = 29,44\%$
2. Hari ke-7 kontrol negatif $= \frac{(1,175)^2 - (1,125)^2}{(1,175)^2} \times 100\% = 8,329\%$
3. Hari ke-7 Formula I $= \frac{(1,2)^2 - (1,125)^2}{(1,2)^2} \times 100\% = 12,109\%$
4. Hari ke-7 Formula II $= \frac{(1,15)^2 - (1,025)^2}{(1,15)^2} \times 100\% = 20,557\%$
5. Hari ke-7 Formula III $= \frac{(1,15)^2 - (1,05)^2}{(1,15)^2} \times 100\% = 16,635\%$

Lampiran 18. Hasil pengujian SPSS persen penyembuhan luka bakar

Tests of Normality^{a,b}

	Hari	Kolmogorov-Smirnov ^c			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Kelompok	18	.	2	.			
	19	.307	4	.	.729	4	.024
	20	.250	4	.	.945	4	.683
	21	.	2	.			
	22	.260	2	.			
	23	.	2	.			
	24	.	2	.			

a. Kelompok is constant when Hari = 16. It has been omitted.

b. Kelompok is constant when Hari = 17. It has been omitted.

c. Lilliefors Significance Correction

Dari hasil output diatas dapat diketahui bahwa nilai sig < 0,05 dapat disimpulkan bahwa data tersebut tidak terdistribusi normal.

Kruskal-Wallis Test

Ranks

	Kelompok	N	Mean Rank
Hari	Formula I	4	13.25
	Formula II	4	8.50
	Formula III	4	9.75
	Kontrol positif	4	2.50
	Kontrol negatif	4	18.50
	Total	20	

Test Statistics^{a,b}

	Hari
Kruskal-Wallis H	16.321
df	4
Asymp. Sig.	.003

a. Kruskal Wallis Test

b. Grouping Variable:
Kelompok

Dari hasil output diatas dapat diketahui bahwa nilai sig < 0,05 maka dapat dikatakan sediaan memiliki perbedaan yang signifikan.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula I	4	6.50	26.00
	Kontrol positif	4	2.50	10.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.337
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula I	4	2.50	10.00
	Kontrol negatif	4	6.50	26.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula I	4	6.25	25.00
	Formula II	4	2.75	11.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	1.000
Wilcoxon W	11.000
Z	-2.097
Asymp. Sig. (2-tailed)	.036
Exact Sig. [2*(1-tailed Sig.)]	.057 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula I	4	5.50	22.00
	Formula III	4	3.50	14.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.183
Asymp. Sig. (2-tailed)	.237
Exact Sig. [2*(1-tailed Sig.)]	.343 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula II	4	6.50	26.0
	Kontrol positif	4	2.50	10.0
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula II	4	2.75	11.00
	Formula I	4	6.25	25.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	1.000
Wilcoxon W	11.000
Z	-2.097
Asymp. Sig. (2-tailed)	.036
Exact Sig. [2*(1-tailed Sig.)]	.057 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula III	4	6.50	26.00
	Kontrol positif	4	2.50	10.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.337
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula II	4	2.50	10.00
	Kontrol negatif	4	6.50	26.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.366
Asymp. Sig. (2-tailed)	.018
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula II	4	4.25	17.00
	Formula III	4	4.75	19.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	7.000
Wilcoxon W	17.000
Z	-.316
Asymp. Sig. (2-tailed)	.752
Exact Sig. [2*(1-tailed Sig.)]	.886 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

		Ranks		
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula III	4	2.50	10.00
	Kontrol negatif	4	6.50	26.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula III	4	3.50	14.00
	Formula I	4	5.50	22.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.183
Asymp. Sig. (2-tailed)	.237
Exact Sig. [2*(1-tailed Sig.)]	.343 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Formula III	4	4.75	19.00
	Formula II	4	4.25	17.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	7.000
Wilcoxon W	17.000
Z	-.316
Asymp. Sig. (2-tailed)	.752
Exact Sig. [2*(1-tailed Sig.)]	.886 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.

Mann-Whitney Test

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
Hari	Kontrol positif	4	2.50	10.00
	Kontrol negatif	4	6.50	26.00
	Total	8		

Test Statistics^a

Hari	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable:
Kelompok

b. Not corrected for ties.