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Lampiran 1. Surat keterangan determinasi tanaman salam



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

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



Nomor : KM.04.02/2/2403/2022
Hal : Keterangan Determinasi

9 Desember 2022

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

Merujuk surat Saudara nomor: 930/H6-04/17.11.2022 tanggal 17 November 2022 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Dendi Rudini
Nama Sampel : Salam
Sampel : Tanaman Segar
Spesies : *Syzygium polyanthum* (Wight) Walp.
Sinonim : *Eugenia polyantha* Wight
Familia : Myrtaceae
Penanggung Jawab : Isna Jati Asiyah, M.Sc.

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

Atas perhatian Saudara, kami sampaikan terima kasih.

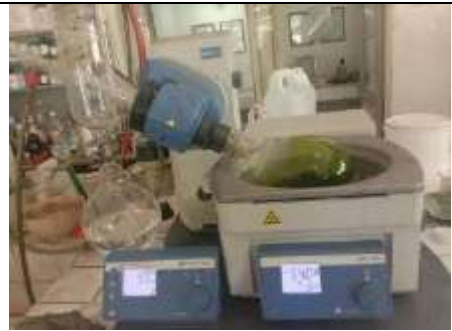
Kepala Balai Besar Penelitian dan
Pengembangan Tanaman Obat dan Obat
Tradisional,



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

Lampiran 2. Alat-alat penelitian

Botol maserasi



Alat rotary evaporator



Timbangan analitik



Desikator



Krus



Oven



Sterling bidwell



Autoklaf

Lampiran 3. Tanaman salam

Tanaman salam



Daun salam



Serbuk daun salam



Ekstrak etanol daun salam

Lampiran 4. Hasil perhitungan persentase rendemen pengeringan daun salam dan daun salam (*Syzygium polyanthum* (Wight) Walp.)

Sampel	Bobot basah (g)	Bobot kering (g)	% rendemen
Daun salam	14000	1800	12.857%.

$$\text{Rendemen simplisia kering daun salam} = \frac{\text{bobot kering}}{\text{bobot basah}} \times 100\%$$

Sampel	Bobot kering (g)	Bobot serbuk (g)	Rendemen (%)
Daun salam	1.800	1.105	61,39

$$= \frac{1800}{14000} \times 100\%$$

$$= 12.85$$

Rendemen serbuk terhadap berat kering

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

$$= \frac{1105 \text{ g}}{1800 \text{ g}} \times 100\%$$

$$= 61,39\%$$

Lampiran 5. Hasil standarisasi serbuk daun salam

1. Hasil penetapan susut pengeringan serbuk metode *moisture balance*

Replikasi	Bobot serbuk (gram)	Kadar lembab (%)
1	2	6
2	2	6
3	2	5,5
Rata-rata±SD		5,83±0,29

Replikasi 1 =6%

Replikasi 2 =6%

Replikasi 3 =5,5%

Rata-rata susut pengeringan serbuk dengan metode *moisture balance*

$$\begin{aligned}
 &= \frac{\text{replikasi 1} + \text{replikasi 2} + \text{replikasi 3}}{3} \\
 &= \frac{6 + 6 + 5,5}{3} \\
 &= 5,83\%
 \end{aligned}$$



2. Hasil kadar air serbuk daun salam metode *sterling bidwel*

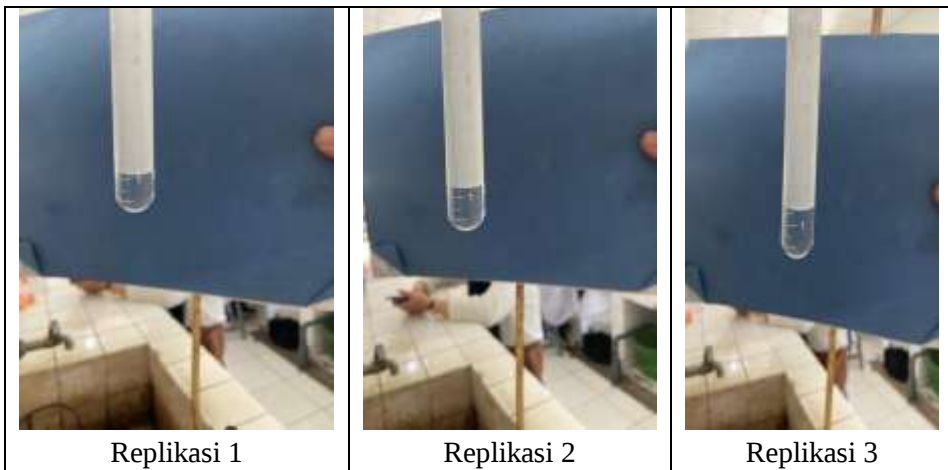
Replikasi	Bobot serbuk (g)	Volume terbaca (ml)	Kadar air serbuk (% v/b)
1.	20,0020	1,3	6,49
2.	20,0040	1,5	7,49
3.	20,0042	1,6	7,99
Rata-rata ± SD			7,32 ± 0,763

$$\begin{aligned}
 \text{Replikasi 1} &= \frac{\text{Volume terbaca}}{\text{Bobot serbuk}} \times 100\% \\
 &= \frac{1,3}{20,0020} \times 100\% \\
 &= 6,49\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Replikasi 2} &= \frac{\text{Volumeter baca}}{\text{Bobot serbuk}} \times 100\% \\
 &= \frac{1,5}{20,0040} \times 100\% \\
 &= 7,49\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Replikasi} &= \frac{\text{Volumeter baca}}{\text{Bobot serbuk}} \times 100\% \\
 &= \frac{1,6}{20,0042} \times 100\% \\
 &= 7,99\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Rata-rata kadar air serbuk daun salam} &= \frac{6,49\% + 7,49\% + 7,99\%}{3} \\
 &= 7,32\%
 \end{aligned}$$



Lampiran 6. Hasil randemen dan standarisasi ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.)

1. Rendemen ekstrak



Perhitungan randemen ekstrak daun salam :

$$\text{Randemen} = \frac{\text{Bobot ekstrak kental}}{\text{Bobot serbuk}} \times 100\%$$

$$\text{Randemen} = \frac{199 \text{ gram}}{800 \text{ gram}} \times 100\% = 24,875 \%$$

2. Hasil perhitungan penetapan kadar air ekstrak

➤ Replikasi 1

- Bobot kurs kosong = 39,7461 g
- Bobot kurs + ekstrak = 49,7440 g
- Bobot ekstrak = 49,7440 g – 39,7461 g = 9,9979 g
- Bobot kurs kosong + ekstrak setelah pemanasan = 40,5869 g
- Bobot ekstrak setelah pemanasan = 40,5869 g - 39,7461 g = 0,8408 g
- Kadar lembab ekstrak = $\frac{\text{Bobot konstan}}{\text{Bobot awal}} \times 100\%$
 $= \frac{0,8408 \text{ gram}}{9,9979 \text{ gram}} \times 100\%$
 $= 8,40 \%$

➤ **Replikasi 2**

- Bobot kurs kosong = 38,7077 g
- Bobot kurs + ekstrak = 48,7054 g
- Bobot ekstrak = 48,7054 g – 38,7077 g
= 9,9977 g
- Bobot kurs kosong + ekstrak setelah pemanasan = 39,5151 g
- Bobot ekstrak setelah pemanasan = 39,5151 g – 38,7077 g
= 0,8074 g
- Kadar lembab ekstrak
$$= \frac{\text{Bobot konstan}}{\text{Bobot awal}} \times 100\%$$
$$= \frac{0,8074 \text{ gram}}{9,9977 \text{ gram}} \times 100\%$$
$$= 8,075 \%$$

➤ **Replikasi 3**

- Bobot kurs kosong = 39,8450 g
- Bobot kurs + ekstrak = 49,8395 g
- Bobot ekstrak = 49,8395 g – 39,8450 g
= 9,9945 g
- Bobot kurs kosong + ekstrak setelah pemanasan = 40,6057 g
- Bobot ekstrak setelah pemanasan = 40,6057 g – 39,8450 g
= 0,7607 g
- Kadar lembab ekstrak
$$= \frac{\text{Bobot konstan}}{\text{Bobot awal}} \times 100\%$$
$$= \frac{0,7607 \text{ gram}}{9,9945 \text{ gram}} \times 100\%$$
$$= 7,61 \%$$

Rata-rata kadar lembab ekstrak etanol daun salam

$$= 8,40 \% + 8,075 \% + 7,61 \% / 3$$

$$= 8,03 \pm 0,40$$

**Lampiran 7. Identifikasi kandungan senyawa ekstrak etanol daun
daun salam (*Syzygium polyanthum* (Wight) Walp.)
dengan metode tabung**



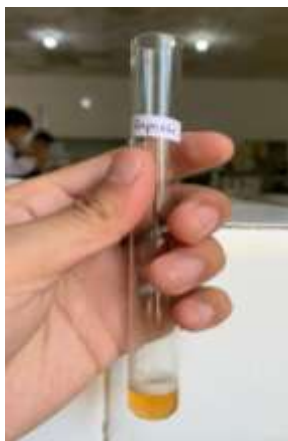
Alkaloid
(Reagen Bouchardat)



Alkaloid
(Reagen Dragendroft)



Flavonoid



Saponin



Tanin



Triterpenoid

Lampiran 8. Pengujian mutu fisik sediaan emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.)



Formulasi ekstrak



Formula emulgel



Cf wardah spf 30



Uji daya lekat



Alat pengujian daya lekat



Uji daya sebar



Uji pH



Uji viskosita



Uji stabilitas

Lampiran 9. Pengujian mutu fisik pH sediaan emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

Replikasi	pH			
	F0	F1	F2	F3
1	5,33	5,06	4,75	4,35
2	5,27	4,95	4,78	4,38
3	5,29	5,01	4,81	4,42
Rata-rata±SD	5,29	5,00	4,78	4,38

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

pH_emulgel		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_pH_emulgel	F0	.253	3	.	.964	3	.637
F0	F0	.253	3	.	.964	3	.637
F1	F0	.191	3	.	.997	3	.900
F2	F0	.175	3	.	1.000	3	1.000
F3	F0	.204	3	.	.993	3	.843

a. Lilliefors Significance Correction

b. There are no valid cases for Hasil_pH_emulgel when pH_emulgel = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for F0 when pH_emulgel = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for F1 when pH_emulgel = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for F2 when pH_emulgel = 2.000. Statistics cannot be computed for this level.

f. There are no valid cases for F3 when pH_emulgel = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_pH_emulgel	.444	3	8	.728

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_pH_emulgel	Between Groups	1.337	3	.446	292.211	.000
	Within Groups	.012	8	.002		
	Total	1.349	11			

Hasil_pH_emulgel

pH_emulgel		N	Subset for alpha = 0.05			
			1	2	3	4
Tukey HSD ^a	F3	3	4.3833	4.7800	5.0067	5.2967
	F2	3				
	F1	3				
	F0	3				
	Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 10. Pengujian mutu fisik viskositas sediaan emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

Replikasi	Viskositas (dPa.s)			
	F0	F1	F2	F3
1	270	220	200	210
2	300	210	230	190
3	310	240	210	170
Rata-rata±SD	293,33	223,33	213,33	186,67

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

Viskositas_emulgel		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_visikositas_emulgel	F0	.292	3	.	.923	3	.463
F0	F0	.292	3	.	.923	3	.463
F1	F0	.253	3	.	.964	3	.637
F2	F0	.253	3	.	.964	3	.637
F3	F0	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

b. There are no valid cases for Hasil_visikositas_emulgel when Viskositas_emulgel = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for F0 when Viskositas_emulgel = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for F1 when Viskositas_emulgel = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for F2 when Viskositas_emulgel = 2.000. Statistics cannot be computed for this level.

f. There are no valid cases for F3 when Viskositas_emulgel = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_visikositas_emulgel	.790	3	8	.533

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_visikositas_emulgel	Between Groups	27025.000	3	9008.333	36.033	.000
	Within Groups	2000.000	8	250.000		
	Total	29025.000	11			

Hasil_visikositas_emulgel

Viskositas_emulgel		N	Subset for alpha = 0.05		
			1	2	3
Tukey HSD ^a	F3	3	160.00		
	F2	3		213.33	
	F1	3		223.33	
	F0	3			293.33
	Sig.		1.000	.864	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 11. Pengujian mutu fisik daya sebar sediaan emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

Formula	Replikasi	Daya sebar (cm)		
		0 g	50 g	100 g
F0	1	3,1	3,7	3,9
	2	3,3	3,5	4
	3	3,4	3,6	4,1
Rata-rata±SD		3,26±0,15	3,6±0,10	4±0,10
F1	1	4,2	4,5	5,1
	2	4,1	4,6	5
	3	4,3	4,7	4,8
Rata-rata±SD		4,2±0,10	4,6±0,10	4,96±0,15
F2	1	4,4	4,8	5,1
	2	4,3	4,7	4,9
	3	4,5	5	5,3
Rata-rata±SD		4,4±0,10	4,83±0,15	5,1±0,20
F3	1	4,4	4,9	5,5
	2	4,5	5,2	5,7
	3	4,6	5,1	5,4
Rata-rata±SD		4,5±0,10	5,06±0,15	5,53±0,15

Tests of Normality^{b,c,d,e,f,g,h,i,j,k,l,m,n}

Uji_dayasebar		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Uji_dayasebar_emulgel	1	.253	3	.	.964	3	.637
F0_beban_0	1	.253	3	.	.964	3	.637
F0_beban_50	1	.175	3	.	1.000	3	1.000
F0_beban_100	1	.175	3	.	1.000	3	1.000
F1_beban_0	1	.175	3	.	1.000	3	1.000
F1_beban_50	1	.175	3	.	1.000	3	1.000
F1_beban_100	1	.253	3	.	.964	3	.637
F2_beban_0	1	.175	3	.	1.000	3	1.000
F2_beban_50	1	.253	3	.	.964	3	.637
F2_beban_100	1	.175	3	.	1.000	3	1.000
F3_beban_0	1	.175	3	.	1.000	3	1.000
F3_beban_50	1	.253	3	.	.964	3	.637
F3_beban_100	1	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

b. There are no valid cases for Uji_dayasebar_emulgel when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for F0_beban_0 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for F0_beban_50 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for F0_beban_100 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

f. There are no valid cases for F1_beban_0 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

g. There are no valid cases for F1_beban_50 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

h. There are no valid cases for F1_beban_100 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

i. There are no valid cases for F2_beban_0 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

j. There are no valid cases for F2_beban_50 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

k. There are no valid cases for F2_beban_100 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

l. There are no valid cases for F3_beban_0 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

m. There are no valid cases for F3_beban_50 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

n. There are no valid cases for F3_beban_100 when Uji_dayasebar = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Uji_dayasebar_emulgel	.420	11	24	.932

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Uji_dayasebar_emulgel	Between Groups	14.306	11	1.301	72.028	.000
	Within Groups	.433	24	.018		
	Total	14.739	35			

Lampiran 12. Pengujian mutu fisik daya lekat sediaan emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

Replikasi	Daya Lekat (detik)			
	F0	F1	F2	F3
1	3.18	3.01	2.85	2.54
2	3.10	2.89	2.76	2.48
3	3.12	2.97	2.80	2.49
Rata-rata±SD	3.13	2.95	2,80	2.50

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

daya_lekat_emulgel		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_daya_lekat_emulgel	F0	.292	3	.	.923	3	.463
F0	F0	.292	3	.	.923	3	.463
F1	F0	.253	3	.	.964	3	.637
F2	F0	.196	3	.	.996	3	.878
F3	F0	.328	3	.	.871	3	.298

a. Lilliefors Significance Correction

b. There are no valid cases for Hasil_daya_lekat_emulgel when daya_lekat_emulgel = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for F0 when daya_lekat_emulgel = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for F1 when daya_lekat_emulgel = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for F2 when daya_lekat_emulgel = 2.000. Statistics cannot be computed for this level.

f. There are no valid cases for F3 when daya_lekat_emulgel = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_daya_lekat_emulgel	.477	3	8	.707

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_daya_lekat_emulgel	Between Groups	.642	3	.214	100.316	.000
	Within Groups	.017	8	.002		
	Total	.659	11			

Hasil_daya_lekat_emulgel

daya_lekat_emulgel		N	Subset for alpha = 0.05			
			1	2	3	4
Tukey HSD ^a	F3	3	2.5033			
	F2	3		2.8033		
	F1	3			2.9567	
	F0	3				3.1333
	Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 13. Pengujian aktivitas tabir surya SPF ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

➤ **Nilai SPF ekstrak etanol daun salam 4%**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2232	0,003348	9,2399	0,18021237	10	30
295	0,0817	0,2143	0,01750831				
300	0,2874	0,1953	0,05612922				
305	0,3278	0,1754	0,05749612				
310	0,1864	0,1632	0,03042048				
315	0,0839	0,1556	0,01305484				
320	0,0180	0,1253	0,0022554				
			0,18021237				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,18021237 \times 10$$

$$SPF = 16,6514$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2462	0,003693	9,2399	0,17866773	10	30
295	0,0817	0,2176	0,01777792				
300	0,2874	0,1875	0,0538875				
305	0,3278	0,1824	0,05979072				
310	0,1864	0,1548	0,02885472				
315	0,0839	0,1453	0,01219067				
320	0,0180	0,1374	0,0024732				
			0,17866773				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,17866773 \times 10$$

$$SPF = 16,5087$$

Replikasi 3

λ	EE x I	Abs	$\frac{EE \times I \times Abs}{Abs}$	CF	$\sum \frac{EE \times I \times Abs}{Abs}$	FP	SPF
290	0,0150	0,2498	0,003747	9,2399	0,17932439	10	30
295	0,0817	0,2186	0,01785962				
300	0,2874	0,1881	0,05405994				
305	0,3278	0,1830	0,0599874				
310	0,1864	0,1551	0,02891064				
315	0,0839	0,1461	0,01225779				
320	0,0180	0,1390	0,002502				
			0,17932439				

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$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,17932439 \times 10$$

$$\text{SPF} = 16,5694$$

$$\text{Rata-rata} = 16,576$$

➤ **Nilai SPF ekstrak etanol daun salam 5%**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2726	0,004089	9,2399	0,2023257	10	30
295	0,0817	0,2775	0,02267175				
300	0,2874	0,2769	0,07958106				
305	0,3278	0,1574	0,05159572				
310	0,1864	0,1529	0,02850056				
315	0,0839	0,1539	0,01291221				
320	0,0180	0,1653	0,0029754				
			0,2023257				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,2023257 \times 10$$

$$\text{SPF} = 18,6947$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \text{EE x I x Abs}$	FP	SPF
290	0,0150	0,2724	0,004086	9,2399	0,20136118	10	30
295	0,0817	0,2769	0,02262273				
300	0,2874	0,2757	0,07923618				
305	0,3278	0,1560	0,0511368				
310	0,1864	0,1526	0,028444464				
315	0,0839	0,1537	0,01289543				
320	0,0180	0,1633	0,0029394				
			0,20136118				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,20136118 \times 10$$

$$\text{SPF} = 18,6056$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,2722	0,004083	9,2399	0,20086949	10	30
295	0,0817	0,2760	0,0225492				
300	0,2874	0,2751	0,07906374				
305	0,3278	0,1556	0,05100568				
310	0,1864	0,1524	0,02840736				
315	0,0839	0,1529	0,01280831				
320	0,0180	0,1629	0,0029322				
			0,20086949				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,20086949 \times 10$$

$$SPF = 18,5601$$

$$\text{Rata-rata} = 18,260$$

➤ **Nilai SPF ekstrak etanol daun salam 7%**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,3527	0,0052905	9,2399	0,2677576	10	30
295	0,0817	0,3026	0,02472242				
300	0,2874	0,2627	0,07549998				
305	0,3278	0,2632	0,08627696				
310	0,1864	0,2653	0,04945192				
315	0,0839	0,2638	0,02213282				
320	0,0180	0,2435	0,004383				
			0,2677576				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,2677576 \times 10$$

$$SPF = 24,7405$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,3227	0,0048405	9,2399	0,26602736	10	30
295	0,0817	0,3176	0,02594792				
300	0,2874	0,2676	0,07690824				
305	0,3278	0,2627	0,08611306				
310	0,1864	0,2526	0,04708464				
315	0,0839	0,2500	0,020975				
320	0,0180	0,2310	0,004158				
			0,26602736				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,26602736 \times 10$$

$$SPF = 24,5807$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,3245	0,0048675	9,2399	0,26660303	10	30
295	0,0817	0,3242	0,02648714				
300	0,2874	0,2685	0,0771669				
305	0,3278	0,2636	0,08640808				
310	0,1864	0,2537	0,04728968				
315	0,0839	0,2427	0,02036253				
320	0,0180	0,2234	0,0040212				
			0,26660303				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,26660303 \times 10$$

$$SPF = 24,6339$$

$$\text{Rata-rata} = 24,651$$

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

Perlakuan		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Replikasi	Eks 4%	.184	3	.	.999	3	.927
Eks4	Eks 4%	.184	3	.	.999	3	.927
Eks5	Eks 4%	.265	3	.	.953	3	.583
Eks7	Eks 4%	.263	3	.	.955	3	.593

a. Lilliefors Significance Correction

b. There are no valid cases for Replikasi when Perlakuan = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for Eks4 when Perlakuan = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for Eks5 when Perlakuan = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for Eks7 when Perlakuan = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Replikasi	.081	2	6	.924

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Replikasi	Between Groups	105.809	2	52.904	9466.002	.000
	Within Groups	.034	6	.006		
	Total	105.842	8			

Lampiran 14. Pengujian aktivitas tabir surya SPF emulgel ekstrak etanol daun salam (*Syzygium polyanthum* (Wight) Walp.) dan analisis data SPSS

➤ **Kontrol positif (Wardah gel SPF 30)**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,2839	0,0042585	?	0,3149162	10	30
295	0,0817	0,3026	0,0247224				
300	0,2874	0,3140	0,0902436				
305	0,3278	0,3213	0,1053221				
310	0,1864	0,3242	0,0604309				
315	0,0839	0,3011	0,0252623				
320	0,0180	0,2598	0,0046764				
			0,3149162				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$30 = CF \times 0,31491623 \times 10$$

$$CF = 9,526343$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2911	0,0042585	?	0,3149162	10	30
295	0,0817	0,3110	0,0247224				
300	0,2874	0,3221	0,0902436				
305	0,3278	0,3295	0,1053221				
310	0,1864	0,3328	0,0604309				
315	0,0839	0,3067	0,0252623				
320	0,0180	0,2620	0,0046764				
			0,3149162				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$30 = CF \times 0,3149162 \times 10$$

$$CF = 9,292561$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,3025	0,0042585	?	0,3149162	10	30
295	0,0817	0,3241	0,0247224				
300	0,2874	0,3362	0,0902436				
305	0,3278	0,3439	0,1053221				
310	0,1864	0,3476	0,0604309				
315	0,0839	0,3210	0,0252623				
320	0,0180	0,2752	0,0046764				
			0,3149162				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$30 = CF \times 0,3149162 \times 10$$

$$CF = 8,900785$$

$$\text{Rata-rata} = 9,2399$$

NILAI SPF EMULGEL SEBELUM STABILITAS DENGAN CYCLING TEST**➤ Formula 0 (Basis emulgel)****Replikasi 1**

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,0013	0,0000195	9,2399	0,00598044	10	30
295	0,0817	0,0080	0,0006536				
300	0,2874	0,0018	0,00051732				
305	0,3278	0,0076	0,00249128				
310	0,1864	0,0083	0,00154712				
315	0,0839	0,0078	0,00065442				
320	0,0180	0,0054	0,0000972				
			0,00598044				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00598044 \times 10$$

$$SPF = 0,552587$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,0026	0,000039	9,2399	0,00585667	10	30
295	0,0817	0,0019	0,00015523				
300	0,2874	0,0012	0,00034488				
305	0,3278	0,0095	0,0031141				
310	0,1864	0,0083	0,00154712				
315	0,0839	0,0066	0,00055374				
320	0,0180	0,0057	0,0001026				
			0,00585667				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00585667 \times 10$$

$$SPF = 0,54115$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,0019	0,0000285	9,2399	0,00574528	10	30
295	0,0817	0,0020	0,001634				
300	0,2874	0,0039	0,00112086				
305	0,3278	0,0082	0,00268796				
310	0,1864	0,0067	0,00124888				
315	0,0839	0,0052	0,00043628				
320	0,0180	0,0033	0,0000594				
			0,00574528				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00574528 \times 10$$

$$SPF = 0,530858$$

$$\text{Rata-rata} = 0,5420$$

➤ **Formula 1 (sediaan emulgel ekstrak 4%)**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \frac{EE \times I \times Abs}{Abs}$	FP	SPF
290	0,0150	0,1790	0,002685	9,2399	0,154497765	10	30
295	0,0817	0,1629	0,013304845				
300	0,2874	0,1565	0,0449781				
305	0,3278	0,1540	0,0504812				
310	0,1864	0,1490	0,0277736				
315	0,0839	0,1478	0,01240042				
320	0,0180	0,1597	0,0028746				
			0,154497765				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,154497765 \times 10$$

$$SPF = 14,2754$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \frac{EE \times I \times Abs}{Abs}$	FP	SPF
290	0,0150	0,1798	0,002697	9,2399	0,15597532	10	30
295	0,0817	0,1689	0,01379913				
300	0,2874	0,1576	0,04529424				
305	0,3278	0,1559	0,05110402				
310	0,1864	0,1487	0,027717668				
315	0,0839	0,1475	0,01237525				
320	0,0180	0,1660	0,002988				
			0,15597532				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,15597532 \times 10$$

$$SPF = 14,4120$$

80

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1799	0,0026985	9,2399	0,15973191	10	30
295	0,0817	0,1690	0,0138073				
300	0,2874	0,1681	0,04831194				
305	0,3278	0,1575	0,0516285				
310	0,1864	0,1492	0,02781088				
315	0,0839	0,1481	0,01242559				
320	0,0180	0,1694	0,0030492				
			0,15973191				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,15973191 \times 10$$

$$\text{SPF} = 14,7591$$

$$\text{Rata-rata} = 14,482$$

➤ **Formula 2 (sediaan emulgel ekstrak 5%)**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1897	0,0028455	9,2399	0,17632066	10	30
295	0,0817	0,1879	0,01535143				
300	0,2874	0,1795	0,0515883				
305	0,3278	0,1785	0,0585123				
310	0,1864	0,1658	0,0309512				
315	0,0839	0,1679	0,01408681				
320	0,0180	0,1684	0,0030312				
			0,17632066				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,17632066 \times 10$$

$$\text{SPF} = 16,2919$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1916	0,002874	9,2399	0,17729215	10	30
295	0,0817	0,1885	0,01540045				
300	0,2874	0,1842	0,05293908				
305	0,3278	0,1780	0,0583484				
310	0,1864	0,1651	0,03077464				
315	0,0839	0,1662	0,01394418				
320	0,0180	0,1673	0,0030114				
			0,17729215				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,17729215 \times 10$$

$$SPF = 16,3816$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1897	0,0028455	9,2399	0,17546269	10	30
295	0,0817	0,1862	0,01521254				
300	0,2874	0,1795	0,0515883				
305	0,3278	0,1768	0,05795504				
310	0,1864	0,1658	0,0309512				
315	0,0839	0,1661	0,01393579				
320	0,0180	0,1678	0,0030204				
			0,17546269				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,17546269 \times 10$$

$$SPF = 16,2126$$

$$\text{Rata-rata} = 16,295$$

➤ Formula 3 (sediaan emulgel ekstrak 7%)**Replikasi 1**

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,2268	0,003402	9,2399	0,21831166	10	30
295	0,0817	0,2251	0,01839067				
300	0,2874	0,2198	0,06317052				
305	0,3278	0,2179	0,07142762				
310	0,1864	0,2159	0,04024376				
315	0,0839	0,2131	0,01787909				
320	0,0180	0,2110	0,003798				
			0,21831166				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,21831166 \times 10$$

$$SPF = 20,1717$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2349	0,0035235	9,2399	0,22592339	10	30
295	0,0817	0,2325	0,01899525				
300	0,2874	0,2272	0,06529728				
305	0,3278	0,2258	0,7401724				
310	0,1864	0,2231	0,04158584				
315	0,0839	0,2212	0,01855868				
320	0,0180	0,2192	0,0039456				
			0,22592339				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,22592339 \times 10$$

$$\text{SPF} = 20,8751$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2310	0,003465	9,2399	0,22273086	10	30
295	0,0817	0,2282	0,01864394				
300	0,2874	0,2244	0,06449256				
305	0,3278	0,2219	0,07273882				
310	0,1864	0,2209	0,04117576				
315	0,0839	0,2182	0,01830698				
320	0,0180	0,2171	0,0039078				
			0,22273086				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,22273086 \times 10$$

$$\text{SPF} = 20,5801$$

$$\text{Rata-rata} = 20,542$$

NILAI SPF EMULGEL SESUDAH STABILITAS DENGAN CYCLING TEST**➤ Formula 0 (Basis emulgel)****Replikasi 1**

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,0090	0,000135	9,2399	0,00491421	10	30
295	0,0817	0,0078	0,00063726				
300	0,2874	0,0060	0,0017244				
305	0,3278	0,0045	0,0014751				
310	0,1864	0,0034	0,00063376				
315	0,0839	0,0031	0,00026009				
320	0,0180	0,0027	0,0000486				
			0,00491421				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00491421 \times 10$$

$$SPF = 0,4541$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,0088	0,000132	9,2399	0,00405806	10	30
295	0,0817	0,0068	0,00055556				
300	0,2874	0,0046	0,00132204				
305	0,3278	0,0034	0,00111452				
310	0,1864	0,0032	0,00059648				
315	0,0839	0,0034	0,00028526				
320	0,0180	0,0029	0,0000522				
			0,00405806				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00405806 \times 10$$

$$SPF = 0,3750$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,0085	0,0001275	9,2399	0,00434542	10	30
295	0,0817	0,0069	0,0005673				
300	0,2874	0,0050	0,001437				
305	0,3278	0,0042	0,00137676				
310	0,1864	0,0032	0,00059648				
315	0,0839	0,0025	0,00020975				
320	0,0180	0,0019	0,0000342				
			0,00434542				

$$SPF = CF \times \{ \sum EE(\lambda) \times I(\lambda) \times abs(\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,00434542 \times 10$$

$$SPF = 0,4015$$

$$\text{Rata-rata} = 0,410$$

➤ **Formula 1 (sediaan emulgel ekstrak 4%)****Replikasi 1**

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1502	0,002253	9,2399	0,14293304	10	30
295	0,0817	0,1476	0,01205892				
300	0,2874	0,1435	0,0412419				
305	0,3278	0,1412	0,04628536				
310	0,1864	0,1420	0,0264688				
315	0,0839	0,1434	0,01203126				
320	0,0180	0,1441	0,0025938				
			0,14293304				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,14293304 \times 10$$

$$SPF = 13,2069$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1512	0,002268	9,2399	0,14340276	10	30
295	0,0817	0,1480	0,0120916				
300	0,2874	0,1442	0,04144308				
305	0,3278	0,1415	0,0463837				
310	0,1864	0,1424	0,02654336				
315	0,0839	0,1438	0,01206482				
320	0,0180	0,1449	0,0026082				
			0,14340276				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,14340276 \times 10$$

$$SPF = 13,2503$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1510	0,002265	9,2399	0,14329163	10	30
295	0,0817	0,1475	0,01205075				
300	0,2874	0,1438	0,04132812				
305	0,3278	0,1419	0,04651482				
310	0,1864	0,1422	0,02650608				
315	0,0839	0,1434	0,01203126				
320	0,0180	0,1442	0,0025956				
			0,14329163				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,14329163 \times 10$$

$$\text{SPF} = 13,2400$$

$$\text{Rata-rata} = 13,232$$

➤ **Formula 2 (sediaan emulgel ekstrak 5%)**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1860	0,00279	9,2399	0,15664605	10	30
295	0,0817	0,1680	0,0137256				
300	0,2874	0,1640	0,0471336				
305	0,3278	0,1553	0,05090734				
310	0,1864	0,1460	0,0272144				
315	0,0839	0,1449	0,01215711				
320	0,0180	0,1510	0,002718				
			0,15664605				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,15664605 \times 10$$

$$\text{SPF} = 14,4739$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1860	0,00279	9,2399	0,15346134	10	30
295	0,0817	0,1678	0,01370926				
300	0,2874	0,1555	0,0446907				
305	0,3278	0,1496	0,04903888				
310	0,1864	0,1490	0,0277736				
315	0,0839	0,1510	0,0126689				
320	0,0180	0,1550	0,00279				
			0,15346134				

$$\text{SPF} = \text{CF} \times \{ \sum \text{EE}(\lambda) \times \text{I}(\lambda) \times \text{abs}(\lambda) \} \times \text{FP}$$

$$\text{SPF} = 9,2399 \times 0,15346134 \times 10$$

$$\text{SPF} = 14,1797$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,1810	0,0027285	9,2399	0,15807234	10	30
295	0,0817	0,1741	0,01422397				
300	0,2874	0,1666	0,04788084				
305	0,3278	0,1581	0,05182518				
310	0,1864	0,1472	0,02743808				
315	0,0839	0,1383	0,01160337				
320	0,0180	0,1318	0,0023724				
			0,15807234				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,15807234 \times 10$$

$$SPF = 14,6057$$

$$\text{Rata-rata} = 14,420$$

➤ **Formula 3 (sediaan emulgel ekstrak 7%)**

Replikasi 1

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2490	0,003735	9,2399	0,19937511	10	30
295	0,0817	0,2317	0,01892989				
300	0,2874	0,2156	0,06196344				
305	0,3278	0,1985	0,0650683				
310	0,1864	0,1792	0,03340288				
315	0,0839	0,1620	0,0135918				
320	0,0180	0,1491	0,0026838				
			0,19937511				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,19937511 \times 10$$

$$SPF = 18,4221$$

Replikasi 2

λ	EE x I	Abs	EE x I x Abs	CF	$\sum$ EE x I x Abs	FP	SPF
290	0,0150	0,2728	0,004092	9,2399	0,20495247	10	30
295	0,0817	0,2547	0,02080899				
300	0,2874	0,2387	0,06860238				
305	0,3278	0,1756	0,05756168				
310	0,1864	0,1934	0,03604976				
315	0,0839	0,1774	0,01488386				
320	0,0180	0,1641	0,0029538				
			0,20495247				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,20495247 \times 10$$

$$SPF = 18,9374$$

Replikasi 3

λ	EE x I	Abs	EE x I x Abs	CF	$\sum EE \times I \times Abs$	FP	SPF
290	0,0150	0,2730	0,004095	9,2399	0,20231336	10	30
295	0,0817	0,2780	0,0227126				
300	0,2874	0,2783	0,07998342				
305	0,3278	0,1558	0,05107124				
310	0,1864	0,1539	0,02868696				
315	0,0839	0,1526	0,01280314				
320	0,0180	0,1645	0,002961				
			0,20231336				

$$SPF = CF \times \{ \sum EE (\lambda) \times I (\lambda) \times abs (\lambda) \} \times FP$$

$$SPF = 9,2399 \times 0,20231336 \times 10$$

$$SPF = 18,6936$$

$$\text{Rata-rata} = 18,684$$

Tests of Normality^{b,c,d,e,f,g,h,i,j}

Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Replikasi 1	.175	3	.	1.000	3	1.000
F0_emulgel_sebelum 1	.175	3	.	1.000	3	1.000
F0_emulgel_sesudah 1	.232	3	.	.980	3	.726
F1_emulgel_sebelum 1	.273	3	.	.945	3	.549
F1_emulgel_sesudah 1	.314	3	.	.893	3	.363
F2_emulgel_sebelum 1	.182	3	.	.999	3	.935
F2_emulgel_sesudah 1	.268	3	.	.950	3	.571
F3_emulgel_sebelum 1	.211	3	.	.991	3	.814
F3_emulgel_sesudah 1	.182	3	.	.999	3	.935

a. Lilliefors Significance Correction

b. There are no valid cases for Replikasi when Perlakuan = 2.000. Statistics cannot be computed for this level.

c. There are no valid cases for F0_emulgel_sebelum when Perlakuan = 2.000. Statistics cannot be computed for this level.

d. There are no valid cases for F0_emulgel_sesudah when Perlakuan = 2.000. Statistics cannot be computed for this level.

e. There are no valid cases for F1_emulgel_sebelum when Perlakuan = 2.000. Statistics cannot be computed for this level.

f. There are no valid cases for F1_emulgel_sesudah when Perlakuan = 2.000. Statistics cannot be computed for this level.

g. There are no valid cases for F2_emulgel_sebelum when Perlakuan = 2.000. Statistics cannot be computed for this level.

h. There are no valid cases for F2_emulgel_sesudah when Perlakuan = 2.000. Statistics cannot be computed for this level.

i. There are no valid cases for F3_emulgel_sebelum when Perlakuan = 2.000. Statistics cannot be computed for this level.

j. There are no valid cases for F3_emulgel_sesudah when Perlakuan = 2.000. Statistics cannot be computed for this level.

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Replikasi	2.610	7	16	.053

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	F0_emulgel_sebelum - F0_emulgel_sesudah	.13333	.03512	.02028	-.04609	.22057	6.576	2	.022
Pair 2	F1_emulgel_sebelum - F1_emulgel_sesudah	1.24667	.23245	.13421	.66923	1.82411	9.289	2	.011
Pair 3	F2_emulgel_sebelum - F2_emulgel_sesudah	1.88000	.30447	.17578	1.12366	2.63634	10.695	2	.009
Pair 4	F3_emulgel_sebelum - F3_emulgel_sesudah	1.83333	.07371	.04256	1.65022	2.01644	43.079	2	.001