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Lampiran 1. Surat keterangan determinasi tanaman sirsak



PEMERINTAH PROVINSI JAWA TIMUR
DINAS KESEHATAN
**UPT LABORATORIUM HERBAL
MATERIA MEDICA BATU**

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Nomor : 074/ 279/ 102.20-A/ 2022
Sifat : Biasa
Perihal : **Determinasi Tanaman Sirsak**

Memenuhi permohonan saudara :

Nama : DJJO FANNI PRATAMA
NIM : 24185468A
Fakultas : FARMASI, UNIVERSITAS SETIA BUDI

1. Perihal determinasi tanaman sirsak

Kingdom : Plantae (Tumbuhan)
Divisi : Magnoliophyta (Tumbuhan berbunga)
Kelas : Magnoliopsida (Berkeping dua/ dikotil)
Ordo : Magnoliales
Bangsa : Ranunculales
Suku : Annonaceae
Marga : Annona
Jenis : *Annona muricata* L.
Nama Daerah : Sirsak (Indonesia); nangka sabrang, nangka landa, muris (Jawa); nangka walanda, sirsak (Sunda); nangka buris (Madura); srikaya jawa (Bali); (Minangkabau); jambu landa (Lampung); langelo walanda (Gorontalo); sirikaya bulanda (Bugis, Makasar).
Kunci Determinasi : 1b-2b-3b-4b-6b-7b-9b-10b-11b-12b-13b-14a-15a-109b-119b-120b-128b-129b-135b-136b-139b-140b-142b-143b-146b-154b-155b-156b-162b-163a-164b-165b-166a:Annonaceae-1b:Annona-1a:*A.muricata*.

2. Morfologi : Habitus: Pohon, tinggi ±8 m. Batang: Berkayu, bulat, bercabang, coklat kotor. Daun: Tunggal, bulat telur atau lanset, ujung runcing, tepi rata, pangkal meruncing, panjang 6-18 cm, lebar 2-6 cm, pertulangan menyirip, tangkai ±5 mm, tangkai hijau kekuningan, hijau. Bunga: Tunggal, pada batang dan ranting, daun kelopak kecil, kuning keputih-putihan, benang sari banyak, berambut, kepala putik silindris, mahkota berdaging, bulat telur, panjang 3-5 cm, kuning muda. Buah: Majemuk, bulat telur, panjang 15-35 cm, diameter 10-15 cm, hijau. Biji: Bulat telur, keras, hitam. Akar: Tunggang, bulat, coklat muda.
3. Bagian yang digunakan : Daun.
4. Penggunaan : Penelitian (Skripsi).
5. Daftar Pustaka
▪ Van Steenis, CGGJ. 2008. *FLORA: untuk Sekolah di Indonesia*. Pradnya Paramita, Jakarta.

Demikian surat keterangan determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 05 April 2022

KEPALA UPT LABORATORIUM HERBAL
MATERIA MEDICA BATU

(Signature)
ACHMAD MABRUR, SKM, M.Kes.
PEMBINA
NIP. 19680203 199203 1 004

Lampiran 2. Hasil uji pH emulgel ekstrak daun sirsak

Waktu	Formula	Uji pH			Rara-rata	SD
		R1	R2	R3		
Hari ke-1	1	6,30	6,22	6,26	6,26	0,04
	2	5,98	5,91	5,87	5,92	0,06
	3	5,82	5,78	5,81	5,80	0,02
	4	5,53	5,49	5,56	5,53	0,04
Hari ke-21	1	6,25	6,18	6,20	6,21	0,04
	2	5,90	5,86	5,83	5,86	0,04
	3	5,75	5,80	5,73	5,76	0,04
	4	5,45	5,52	5,48	5,48	0,04

Lampiran 3. Perhitungan dan hasil penetapan susut kering serbuk daun sirsak

No	Bobot serbuk (g)	Susut pengeringan (%)	Pustaka (%)
1	2	5,0	< 10%
2	2	5,5	
3	2	6,0	
Rata – rata ± SD		5,5 ± 0,50	

Perhitungan

Susut pengeringan I = 5,0 %

Susut pengeringan II = 5,5%

Susut pengeringan III = 6,0%

$$\begin{aligned} \text{Rata-rata susut pengeringan} &= \frac{5,0\%+5,5\%+6,0\%}{3} \times 100\% \\ &= 5,5\% \end{aligned}$$

Lampiran 4. Perhitungan dan hasil penetapan kadar air serbuk daun sirsak

Bobot serbuk (g)	Volume air (ml)	Kadar air (%)	SD
20	1,7	8,5	0,76
20	1,5	7,5	
20	1,4	7	
Rata-rata		7,6	

Perhitungan

Penetapan kadar air I = 1,7

Penetapan kadar air = 1,5

Penetapan kadar air = 1,4

$$\text{Rumus kadar air} = \frac{\text{volume air}}{\text{bobot serbuk}} \times 100\%$$

$$\begin{aligned} \text{Rata-rata kadar air} &= \frac{58,8\%+7,5\%+7\%}{3} \times 100\% \\ &= 7,6\% \end{aligned}$$

Lampiran 5. Perhitungan dan hasil presentase rendemen bobot kering daun sirsak

Sampel	Bobot basah (kg)	Bobot kering (kg)	Rendemen (%)
Daun sirsak	13.8	1.2	11.5%

Perhitungan :

$$\begin{aligned} \% \text{ randemen kering} &= \frac{\text{bobot basah}}{\text{Bobot kering}} \times 100 \\ &= \frac{13,8}{1,2} \times 100 \\ &= 11,5\% \end{aligned}$$

Lampiran 6. Proses ekstraksi daun sirsak



Lampiran 7. Hasil identifikasi senyawa kimia ekstrak daun sirsak

Saponin



Steroid



Tanin



Flavonoid



Alkaloid



Lampiran 8. Hasil formulasi dan pengujian mutu fisik emulgel ekstrak daun sirsak





Lampiran 9. Penetapan kadar air ekstrak

Pengujian	Hasil (%)			Rerata \pm SD
	I	II	III	
Kadar air	8,54	8,12	8,81	8,29 \pm 0,35

Perhitungan

Kadar air I

- Bobot kurs kosong = 40,5260 gram
 - Bobot kurs + ekstrak awal = 41,6050 gram
 - Bobot kurs + ekstrak akhir = 41,5128 gram
 - Bobot ekstrak awal = 41,6050-40,5260 = 1,079 gram
 - Bobot ekstrak akhir = 41,5128-40,5260 = 0,9868 gram
- $$= \frac{1,079-0,9868}{1,079} \times 100$$
- $$= 8,54 \%$$

Kadar air II

- Bobot kurs kosong = 40,0852 gram
 - Bobot kurs + ekstrak awal = 40,9582 gram
 - Bobot kurs + ekstrak akhir = 40,8873 gram
 - Bobot ekstrak awal = 40,9582-40,0852 = 0,873 gram
 - Bobot ekstrak akhir = 40,8873-40,0852 = 0,8021 gram
- $$= \frac{0,873-0,8021}{0,873} \times 100$$
- $$= 8,12 \%$$

Kadar air III

- Bobot kurs kosong = 40,7573 gram
 - Bobot kurs + ekstrak awal = 41,7893 gram
 - Bobot kurs + ekstrak akhir = 41,6983 gram
 - Bobot ekstrak awal = 41,7893-40,7573 = 1,032 gram
 - Bobot ekstrak akhir = 41,6983-40,7573 = 0,9410 gram
- $$= \frac{1,032-0,9410}{1,032} \times 100$$
- $$= 8,81 \%$$

Lampiran 10. Hasil uji viskositas emulgel ekstrak daun sirsak

Waktu	Formula	Uji Viskositas			Rara-rata	SD
		R1	R2	R3		
Hari ke-1	1	330	320	310	320	10
	2	320	310	300	310	10
	3	310	300	290	300	10
	4	280	290	270	280	10
Hari ke-21	1	310	320	310	313,33	5,77
	2	310	290	300	300	10
	3	300	290	280	290	10
	4	280	270	260	270	10

Lampiran 11. Hasil statistic uji viskositas menggunakan *One Way Anova*

Tests of Normality

Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Hari1	Formula 1	.175	3	1.000	3	1.000
	Formula 2	.175	3	1.000	3	1.000
	Formula 3	.175	3	1.000	3	1.000
	Kontrol negatif	.175	3	1.000	3	1.000
Hari21	Formula 1	.175	3	1.000	3	1.000
	Formula 2	.175	3	1.000	3	1.000
	Formula 3	.175	3	1.000	3	1.000
	Kontrol negatif	.175	3	1.000	3	1.000

a. Lilliefors Significance Correction

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 Hari1 - Hari21	7.50000	7.53778	2.17597	2.71072	12.28928	3.447	11	.005

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hari1	Between Groups	2625.000	3	875.000	8.750	.007
	Within Groups	800.000	8	100.000		
	Total	3425.000	11			
Hari21	Between Groups	3900.000	3	1300.000	13.000	.002
	Within Groups	800.000	8	100.000		
	Total	4700.000	11			

Multiple Comparisons

Dunnnett T3

Dependent Variable	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Hari1	Formula 1	Formula 2	10.00000	8.16497	.767	-25.6490	45.6490
		Formula 3	30.00000	8.16497	.087	-5.6490	65.6490
		Kontrol negatif	-10.00000	8.16497	.767	-45.6490	25.6490
	Formula 2	Formula 1	-10.00000	8.16497	.767	-45.6490	25.6490
		Formula 3	20.00000	8.16497	.262	-15.6490	55.6490
		Kontrol negatif	-20.00000	8.16497	.262	-55.6490	15.6490
	Formula 3	Formula 1	-30.00000	8.16497	.087	-65.6490	5.6490
		Formula 2	-20.00000	8.16497	.262	-55.6490	15.6490
		Kontrol negatif	-40.00000*	8.16497	.034	-75.6490	-4.3510
	Kontrol negatif	Formula 1	10.00000	8.16497	.767	-25.6490	45.6490
		Formula 2	20.00000	8.16497	.262	-15.6490	55.6490
		Formula 3	40.00000*	8.16497	.034	4.3510	75.6490
Hari21	Formula 1	Formula 2	10.00000	8.16497	.767	-25.6490	45.6490
		Formula 3	30.00000	8.16497	.087	-5.6490	65.6490
		Kontrol negatif	-20.00000	8.16497	.262	-55.6490	15.6490
	Formula 2	Formula 1	-10.00000	8.16497	.767	-45.6490	25.6490
		Formula 3	20.00000	8.16497	.262	-15.6490	55.6490
		Kontrol negatif	-30.00000	8.16497	.087	-65.6490	5.6490
	Formula 3	Formula 1	-30.00000	8.16497	.087	-65.6490	5.6490
		Formula 2	-20.00000	8.16497	.262	-55.6490	15.6490
		Kontrol negatif	-50.00000*	8.16497	.015	-85.6490	-14.3510
	Kontrol negatif	Formula 1	20.00000	8.16497	.262	-15.6490	55.6490
		Formula 2	30.00000	8.16497	.087	-5.6490	65.6490
		Formula 3	50.00000*	8.16497	.015	14.3510	85.6490

*. The mean difference is significant at the 0.05 level.

Lampiran 12. Hasil uji daya lekat emulgel ekstrak daun sirsak

waktu	formula	Daya lekat			rata-rata	SD
		R1	R2	R3		
Hari ke-1	1	3,23	3,30	3,19	3,24	0,06
	2	3,15	3,18	3,14	3,16	0,02
	3	3,07	3,01	2,98	3,02	0,05
	4	2,81	2,79	2,68	2,76	0,07
Hari ke-21	1	3,20	3,26	3,17	3,21	0,05
	2	3,13	3,16	3,12	3,14	0,02
	3	3,02	2,99	3,03	3,01	0,02
	4	2,67	2,83	2,76	2,75	0,08

Lampiran 13. Hasil statistic uji daya lekat menggunakan *One Way Anova*

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hari1	Formula 1	.292	3	.	.923	3	.463
	Formula 2	.253	3	.	.964	3	.637
	Formula 3	.333	3	.	.862	3	.274
	Kontrol Negatif	.238	3	.	.976	3	.702
Hari21	Formula 1	.292	3	.	.923	3	.463
	Formula 2	.292	3	.	.923	3	.463
	Formula 3	.200	3	.	.995	3	.862
	Kontrol Negatif	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Paired Samples Test

Pair 1	Mean	Std. Deviation	Paired Differences			t	df	Sig. (2-tailed)
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Hari1 - Hari21	.01583	.05567	.01607	-.01954	.05120	.985	11	.346

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hari1	Between Groups	.397	3	.132	50.256	.000
	Within Groups	.021	8	.003		
	Total	.418	11			
Hari21	Between Groups	.362	3	.121	51.314	.000
	Within Groups	.019	8	.002		
	Total	.381	11			

Hari1Tukey HSD^a

Formula	N	Subset for alpha = 0.05		
		1	2	3
Formula 3	3	2.7600		
Formula 2	3		3.0200	
Formula 1	3			3.1567
Kontrol Negatif	3			3.2400
Sig.		1.000	1.000	.268

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Hari21Tukey HSD^a

Formula	N	Subset for alpha = 0.05		
		1	2	3
Formula 3	3	2.7533		
Formula 2	3		3.0133	
Formula 1	3		3.1367	3.1367
Kontrol Negatif	3			3.2100
Sig.		1.000	.056	.318

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 14. Hasil uji daya sebar emulgel ekstrak daun sirsak**Formula 1**

Replikasi	Hari ke-1			Hari ke-21		
	50 gram	100 gram	150 gram	50 gram	100 gram	150 gram
1	6,03	6,11	6,15	6,05	6,15	6,2
2	6,07	6,07	6,09	6,08	6,10	6,12
3	6,04	6,09	6,08	6,07	6,14	6,16
Rata-rata	6,05	6,09	6,11	6,07	6,13	6,16
SD	0,02	0,02	0,04	0,02	0,03	0,04

Formula 2

Replikasi	Hari ke-1			Hari ke-21		
	50 gram	100 gram	150 gram	50 gram	100 gram	150 gram
1	6,06	6,17	6,2	6,09	6,19	6,22
2	6,10	6,14	6,19	6,08	6,16	6,18
3	6,09	6,12	6,18	6,15	6,15	6,14
Rata-rata	6,08	6,14	6,19	6,11	6,17	6,18
SD	0,02	0,03	0,01	0,04	0,02	0,04

Formula 3

Replikasi	Hari ke-1			Hari ke-21		
	50 gram	100 gram	150 gram	50 gram	100 gram	150 gram
1	6,10	6,15	6,23	6,13	6,18	6,32
2	6,14	6,17	6,22	6,16	6,22	6,28
3	6,12	6,14	6,23	6,13	6,17	6,3
Rata-rata	6,12	6,15	6,23	6,14	6,19	6,30
SD	0,02	0,02	0,01	0,02	0,03	0,02

Formula 4

Replikasi	Hari ke-1			Hari ke-21		
	50 gram	100 gram	150 gram	50 gram	100 gram	150 gram
1	6,19	6,23	6,34	6,24	6,32	6,41
2	6,22	6,26	6,32	6,27	6,34	6,43
3	6,24	6,27	6,33	6,30	6,35	6,47
Rata-rata	6,22	6,25	6,33	6,27	6,34	6,44
SD	0,03	0,02	0,01	0,03	0,02	0,03

Lampiran 15. Hasil statistic uji daya sebar menggunakan *One Way Anova*

		Tests of Normality					
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
DayaSebarH1	F1 beban 50	.292	3	..	.923	3	.463
	F1 beban 100	.175	3	..	1.000	3	1.000
	F1 beban 150	.175	3	..	1.000	3	1.000
	F2 beban 50	.175	3	..	1.000	3	1.000
	F2 beban 100	.253	3	..	.964	3	.637
	F2 beban 150	.175	3	..	1.000	3	1.000
	F3 beban 50	.219	3	..	.987	3	.780
	F3 beban 100	.292	3	..	.923	3	.463
	F3 beban 150	.175	3	..	1.000	3	1.000
	F4 beban 50	.292	3	..	.923	3	.463
	F4 beban 100	.175	3	..	1.000	3	1.000
	F4 beban 150	.337	3	..	.855	3	.253
DayaSebarH21	F1 beban 50	.337	3	..	.855	3	.253
	F1 beban 100	.292	3	..	.923	3	.463
	F1 beban 150	.175	3	..	1.000	3	1.000
	F2 beban 50	.385	3	..	.750	3	.000
	F2 beban 100	.314	3	..	.893	3	.363
	F2 beban 150	.175	3	..	1.000	3	1.000
	F3 beban 50	.175	3	..	1.000	3	1.000
	F3 beban 100	.253	3	..	.964	3	.637
	F3 beban 150	.253	3	..	.964	3	.637
	F4 beban 50	.253	3	..	.964	3	.637
	F4 beban 100	.314	3	..	.893	3	.363
	F4 beban 150	.175	3	..	1.000	3	1.000

a. Lilliefors Significance Correction

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
DayaSebarH1	Between Groups	.224	11	.020	50.881	.000
	Within Groups	.010	24	.000		
	Total	.233	35			
DayaSebarH21	Between Groups	.382	11	.035	43.978	.000
	Within Groups	.019	24	.001		
	Total	.401	35			

DayaSebarH1

		Subset for alpha = 0.05							
Formula	N	1	2	3	4	5	6	7	
Tukey HSD ^a	F4 beban 50	3	6.0467						
	F1 beban 50	3	6.0833	6.0833					
	F4 beban 100	3	6.0900	6.0900					
	F4 beban 150	3		6.1067	6.1067				
	F2 beban 50	3		6.1200	6.1200				
	F1 beban 100	3			6.1500	6.1500			
	F2 beban 100	3			6.1533	6.1533			
	F1 beban 150	3				6.1900	6.1900		
	F3 beban 50	3					6.2167	6.2167	
	F2 beban 150	3					6.2300	6.2300	
	F3 beban 100	3						6.2533	
	F3 beban 150	3							6.3300
	Sig.		.306	.536	.218	.413	.413	.536	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

DayaSebarH21

		Subset for alpha = 0.05						
Formula	N	1	2	3	4	5	6	
Tukey HSD ^a	F4 beban 50	3	6.0667					
	F1 beban 50	3	6.1067	6.1067				
	F4 beban 100	3	6.1300	6.1300	6.1300			
	F2 beban 50	3	6.1400	6.1400	6.1400			
	F4 beban 150	3		6.1600	6.1600			
	F1 beban 100	3		6.1667	6.1667			
	F1 beban 150	3		6.1800	6.1800			
	F2 beban 100	3			6.1900	6.1900		
	F3 beban 50	3				6.2700	6.2700	
	F2 beban 150	3					6.3000	
	F3 beban 100	3					6.3367	
	F3 beban 150	3						6.4367
	Sig.		.116	.116	.324	.064	.200	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 16. Hasil uji pH emulgel ekstrak daun sirsak setelah stabilitas

Replikasi	Sebelum				Sesudah			
	F1	F2	F3	F4	F1	F2	F3	F4
1	6,3	5,87	5,82	5,49	6,29	5,89	5,78	5,47
2	6,22	5,91	5,78	5,56	6,17	5,95	5,78	5,49
3	6,26	5,98	5,81	5,53	6,19	5,81	5,77	5,5
Rata-rata	6,26	5,92	5,80	5,53	6,22	5,88	5,78	5,49
SD	0,04	0,06	0,02	0,04	0,06	0,07	0,01	0,02

Lampiran 17. Hasil statistic uji pH setelah stabilitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1Sebelum	.175	3	.	1.000	3	1.000
F2Sebelum	.238	3	.	.976	3	.702
F3Sebelum	.292	3	.	.923	3	.463
F4Sebelum	.204	3	.	.993	3	.843
F1Setelah	.328	3	.	.871	3	.298
F2Setelah	.204	3	.	.993	3	.843
F3Setelah	.175	3	.	1.000	3	1.000
F4Setelah	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

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	F1Sebelum - F1Setelah	.04333	.03055	.01764	-.03256	.11922	2.457	2	.133
Pair 2	F2Sebelum - F2Setelah	.03687	.11590	.06692	-.25125	.32458	.548	2	.639
Pair 3	F3Sebelum - F3Setelah	.02333	.02887	.01667	-.04838	.09504	1.400	2	.296
Pair 4	F4Sebelum - F4Setelah	.04000	.02646	.01528	-.02572	.10572	2.619	2	.120

Lampiran 18. Hasil uji viskositas emulgel ekstrak daun sirsak setelah stabilitas

Replikasi	Sebelum				Sesudah			
	F1	F2	F3	F4	F1	F2	F3	F4
1	330	320	310	280	320	310	290	270
2	320	310	300	290	310	310	300	280
3	310	300	290	270	320	290	290	270
Rata-rata	320,00	310,00	300,00	280,00	316,67	303,33	293,33	273,33
SD	10,00	10,00	10,00	10,00	5,77	11,55	5,77	5,77

Lampiran 19. Hasil statistic uji viskositas setelah stabilitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1Sebelum	.175	3	.	1.000	3	1.000
F2Sebelum	.175	3	.	1.000	3	1.000
F3Sebelum	.175	3	.	1.000	3	1.000
F4Sebelum	.175	3	.	1.000	3	1.000
F1Setelah	.175	3	.	1.000	3	1.000
F2Setelah	.253	3	.	.964	3	.637
F3Setelah	.175	3	.	1.000	3	1.000
F4Setelah	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Paired Samples Test

	Mean	Std. Deviation	Paired Differences			t	df	Sig. (2-tailed)
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 F1Sebelum - F1Setelah	.00000	17.32051	10.00000	-43.02653	43.02653	.000	2	1.000
Pair 2 F2Sebelum - F2Setelah	3.33333	11.54701	6.66667	-25.35102	32.01768	.500	2	.667
Pair 3 F3Sebelum - F3Setelah	10.00000	10.00000	5.77350	-14.84138	34.84138	1.732	2	.225

Lampiran 20. Hasil uji SPF
Kontrol Positif (Wardah gel SPF 30)
Replikasi I

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,2839	0,0042585	?	0,3149326	10	30
295	0,0817	0,3028	0,0247388				
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				
			0,3149326				

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

$$30 = \text{CF} \times 0,3149326 \times 10$$

$$\text{CF} = 9,525849$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,2911	0,0043665	?	0,3228389	10	30
295	0,0817	0,3110	0,0254087				
300	0,2874	0,3221	0,0925715				
305	0,3278	0,3295	0,1080101				
310	0,1864	0,3328	0,0620339				
315	0,0839	0,3067	0,0257321				
320	0,0180	0,2620	0,004716				
			0,3228389				

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

$$30 = \text{CF} \times 0,3228389 \times 10$$

$$\text{CF} = 9,292561$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,3025	0,0045375	?	0,3370489	10	30
295	0,0817	0,3241	0,026479				
300	0,2874	0,3362	0,0966239				
305	0,3278	0,3439	0,1127304				
310	0,1864	0,3476	0,0647926				
315	0,0839	0,3210	0,0269319				
320	0,0180	0,2752	0,0049536				
			0,3370489				

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

$$30 = \text{CF} \times 0,3370489 \times 10$$

$$\text{CF} = 8,900785$$

$$\text{Rata-rata nilai CF} = 9,2397$$

Nilai SPF Ekstrak Etanol Daun Sirsak 2%

Replikasi I

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \text{EE x I x Abs}$	FP	SPF
290	0,0150	0,3245	0,0048675	9	0,2723058	10	
295	0,0817	0,2987	0,0244038				
300	0,2874	0,2807	0,0806732				
305	0,3278	0,2685	0,0880143				
310	0,1864	0,2599	0,0484454				
315	0,0839	0,2553	0,0214197				
320	0,0180	0,2490	0,004482				
			0,2723058				

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

$$\text{SPF} = 9,2397 \times 0,2723058 \times 10$$

$$\text{SPF} = 25,16024$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \text{EE x I x Abs}$	FP	SPF
290	0,0150	0,3349	0,0050235	9	0,2883052	10	
295	0,0817	0,3164	0,0258499				
300	0,2874	0,2997	0,0861338				
305	0,3278	0,2847	0,0933247				
310	0,1864	0,2732	0,0509245				
315	0,0839	0,2667	0,0223761				
320	0,0180	0,2596	0,0046728				
			0,2883052				

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

$$\text{SPF} = 9,2397 \times 0,2883052 \times 10$$

$$\text{SPF} = 26,63854$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,3012	0,004518	9	0,2528772	10	
295	0,0817	0,2774	0,0226636				
300	0,2874	0,2607	0,0749252				
305	0,3278	0,2491	0,081655				
310	0,1864	0,2416	0,0450342				
315	0,0839	0,2374	0,0199179				
320	0,0180	0,2313	0,0041634				
			0,2528772				

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

$$\text{SPF} = 9,2397 \times 0,2528772 \times 10$$

$$\text{SPF} = 23,3651$$

Rata-rata nilai SPF ekstrak 2% = 25,0546

Nilai SPF Ekstrak Etanol Daun Sirsak 3 %**Replikasi I**

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,5538	0,008307	9	0,4649418	10	
295	0,0817	0,5098	0,0416507				
300	0,2874	0,4789	0,1376359				
305	0,3278	0,4574	0,1499357				
310	0,1864	0,4445	0,0828548				
315	0,0839	0,4387	0,0368069				
320	0,0180	0,4306	0,0077508				
			0,4649418				

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

$$\text{SPF} = 9,2397 \times 0,4649418 \times 10$$

$$\text{SPF} = 42,95922$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,4794	0,007191	9	0,4022073	10	
295	0,0817	0,4414	0,0360624				
300	0,2874	0,4141	0,1190123				
305	0,3278	0,3959	0,129776				
310	0,1864	0,3846	0,0716894				
315	0,0839	0,3790	0,0317981				
320	0,0180	0,3710	0,006678				
			0,4022073				

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

$$\text{SPF} = 9,2397 \times 0,4022073 \times 10$$

$$\text{SPF} = 37,16275$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \text{EE} \times \text{I} \times \text{Abs}$	FP	SPF
290	0,0150	0,5067	0,0076005	9	0,4235531	10	
295	0,0817	0,4648	0,0379742				
300	0,2874	0,4366	0,1254788				
305	0,3278	0,4173	0,1367909				
310	0,1864	0,4038	0,0752683				
315	0,0839	0,3984	0,0334258				
320	0,0180	0,3897	0,0070146				
			0,4235531				

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

$$\text{SPF} = 9,2397 \times 0,4235531 \times 10$$

$$\text{SPF} = 39,13504$$

$$\text{Rata-rata nilai SPF ekstrak 3\%} = 39,7523$$

Nilai SPF Ekstrak Etanol Daun Sirsak 5%

Replikasi I

λ	EE x I	Abs	EE x I x Abs	CF	$\sum \text{EE} \times \text{I} \times \text{Abs}$	FP	SPF
290	0,0150	0,7955	0,0119325	9	0,6666726	10	
295	0,0817	0,7309	0,0597145				
300	0,2874	0,6863	0,1972426				
305	0,3278	0,6565	0,2152007				
310	0,1864	0,6369	0,1187182				
315	0,0839	0,6288	0,0527563				
320	0,0180	0,6171	0,0111078				
			0,6666726				

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

$$\text{SPF} = 9,2397 \times 0,6666726 \times 10$$

$$\text{SPF} = 61,59855$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,7999	0,0119985	9	0,669834	10	
295	0,0817	0,7348	0,0600332				
300	0,2874	0,6893	0,1981048				
305	0,3278	0,6591	0,216053				
310	0,1864	0,6411	0,119501				
315	0,0839	0,6314	0,0529745				
320	0,0180	0,6205	0,011169				
			0,669834				

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

$$\text{SPF} = 9,2397 \times 0,669834 \times 10$$

$$\text{SPF} = 61,89065$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,8116	0,012174	9	0,6789636	10	
295	0,0817	0,7447	0,060842				
300	0,2874	0,6990	0,2008926				
305	0,3278	0,6680	0,2189704				
310	0,1864	0,6492	0,1210109				
315	0,0839	0,6406	0,0537463				
320	0,0180	0,6293	0,0113274				
			0,6789636				

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

$$\text{SPF} = 9,2397 \times 0,6789636 \times 10$$

$$\text{SPF} = 62,7342$$

Rata-rata nilai SPF ekstrak 5% = 62,0745

Nilai SPF Emulgel Sebelum Stabilitas**Formula 1 (Basis)**

Replikasi I

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0091	0,0001365	9,2397	0,00873644	10	
295	0,0817	0,0091	0,00074347				
300	0,2874	0,0091	0,00261534				
305	0,3278	0,0088	0,00288464				
310	0,1864	0,0086	0,00160304				
315	0,0839	0,0075	0,00062925				
320	0,0180	0,0069	0,0001242				
			0,00873644				

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

$$\text{SPF} = 9,2397 \times 0,00873644 \times 10$$

$$\text{SPF} = 0,807221$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0069	0,0001035	9,2397	0,0066294	10	
295	0,0817	0,0071	0,00058007				
300	0,2874	0,0067	0,00192558				
305	0,3278	0,0068	0,00222904				
310	0,1864	0,0065	0,0012116				
315	0,0839	0,0059	0,00049501				
320	0,0180	0,0047	0,0000846				
			0,0066294				

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

$$\text{SPF} = 9,2397 \times 0,0066294 \times 10$$

$$\text{SPF} = 0,612537$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0081	0,0001215	9,2397	0,00836073	10	
295	0,0817	0,0083	0,00067811				
300	0,2874	0,0087	0,00250038				
305	0,3278	0,0084	0,00275352				
310	0,1864	0,0084	0,00156576				
315	0,0839	0,0074	0,00062086				
320	0,0180	0,0067	0,0001206				
			0,00836073				

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

$$\text{SPF} = 9,2397 \times 0,00836073 \times 10$$

$$\text{SPF} = 0,772506$$

$$\text{Rata-rata formula I (basis)} = 0,731$$

Formula II (sediaan emulgel ekstrak 2%)**Replikasi I**

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\frac{\sum EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,0814	0,001221	9,2397	0,10040428	10	
295	0,0817	0,0931	0,00760627				
300	0,2874	0,1003	0,02882622				
305	0,3278	0,1032	0,03382896				
310	0,1864	0,1037	0,01932968				
315	0,0839	0,0965	0,00809635				
320	0,0180	0,0831	0,0014958				
			0,10040428				

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

$$SPF = 9,2397 \times 0,10040428 \times 10$$

$$SPF = 9,2771$$

Replikasi II

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\frac{\sum EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,0826	0,001239	9,2397	0,10191735	10	
295	0,0817	0,0949	0,00775333				
300	0,2874	0,1017	0,02922858				
305	0,3278	0,1046	0,03428788				
310	0,1864	0,1048	0,01953472				
315	0,0839	0,0996	0,00835644				
320	0,0180	0,0843	0,0015174				
			0,10191735				

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

$$SPF = 9,2397 \times 0,10191735 \times 10$$

$$SPF = 9,4169$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0986	0,001479	9,2397	0,11639553	10	
295	0,0817	0,1102	0,00900334				
300	0,2874	0,1168	0,03356832				
305	0,3278	0,1193	0,03910654				
310	0,1864	0,1194	0,02225616				
315	0,0839	0,1103	0,00925417				
320	0,0180	0,0960	0,001728				
			0,11639553				

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

$$\text{SPF} = 9,2397 \times 0,11639553 \times 10$$

$$\text{SPF} = 10,7546$$

$$\text{Rata-rata formula II (sediaan ekstrak 2\%)} = 9,816$$

Formula III (sediaan emulgel ekstrak 3%)**Replikasi I**

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1479	0,0022185	9,2397	0,1590035	10	
295	0,0817	0,1546	0,01263082				
300	0,2874	0,1599	0,04595526				
305	0,3278	0,1617	0,05300526				
310	0,1864	0,1607	0,02995448				
315	0,0839	0,1522	0,01276958				
320	0,0180	0,1372	0,0024696				
			0,1590035				

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

$$\text{SPF} = 9,2397 \times 0,1590035 \times 10$$

$$\text{SPF} = 14,6914$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1573	0,0023595	9,2397	0,1665049	10	
295	0,0817	0,1626	0,01328442				
300	0,2874	0,1674	0,04811076				
305	0,3278	0,1689	0,05536542				
310	0,1864	0,1684	0,03138976				
315	0,0839	0,1596	0,01339044				
320	0,0180	0,1447	0,0026046				
			0,1665049				

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

$$\text{SPF} = 9,2397 \times 0,1665049 \times 10$$

$$\text{SPF} = 15,3846$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1633	0,0024495	9,2397	0,17111176	10	
295	0,0817	0,1676	0,01369292				
300	0,2874	0,1723	0,04951902				
305	0,3278	0,1735	0,0568733				
310	0,1864	0,1725	0,032154				
315	0,0839	0,1638	0,01374282				
320	0,0180	0,1489	0,0026802				
			0,17111176				

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

$$\text{SPF} = 9,2397 \times 0,17111176 \times 10$$

$$\text{SPF} = 15,81021$$

Rata-rata formula III (sediaan ekstrak 3%) = 15,295

Formula IV (sediaan emulgel ekstrak 5%)**Replikasi I**

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\sum \frac{EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,3035	0,0045525	9,2397	0,29409957	10	
295	0,0817	0,2983	0,02437111				
300	0,2874	0,2974	0,08547276				
305	0,3278	0,2955	0,0968649				
310	0,1864	0,2933	0,05467112				
315	0,0839	0,2802	0,02350878				
320	0,0180	0,2588	0,0046584				
			0,29409957				

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

$$SPF = 9,2397 \times 0,29409957 \times 10$$

$$SPF = 27,17392$$

Replikasi II

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\sum \frac{EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,3650	0,005475	9,2397	0,34448375	10	
295	0,0817	0,3546	0,02897082				
300	0,2874	0,3505	0,1007337				
305	0,3278	0,3453	0,11318934				
310	0,1864	0,3401	0,06339464				
315	0,0839	0,3255	0,02730945				
320	0,0180	0,3006	0,0054108				
			0,34448375				

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

$$SPF = 9,2397 \times 0,34448375 \times 10$$

$$SPF = 31,82927$$

Replikasi III

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\frac{\sum EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,3605	0,0054075	9,2397	0,34146465	10	
295	0,0817	0,3501	0,02860317				
300	0,2874	0,3468	0,09967032				
305	0,3278	0,3426	0,11230428				
310	0,1864	0,3378	0,06296592				
315	0,0839	0,3234	0,02713326				
320	0,0180	0,2989	0,0053802				
			0,34146465				

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

$$SPF = 9,2397 \times 0,34146465 \times 10$$

$$SPF = 31,55031$$

Rata-rata formula IV (sediaan ekstrak 5%) = 30,184

Nilai SPF Emulgel Setelah Stabilitas**Formula I (Basis)****Replikasi I**

λ	EE x I	Abs	$\frac{EE \times I \times}{Abs}$	CF	$\frac{\sum EE \times I \times}{Abs}$	FP	SPF
290	0,0150	0,0087	0,0001305	9,2397	0,00409472	10	
295	0,0817	0,0078	0,00063726				
300	0,2874	0,0050	0,001437				
305	0,3278	0,0029	0,00095062				
310	0,1864	0,0032	0,00059648				
315	0,0839	0,0034	0,00028526				
320	0,0180	0,0032	0,0000576				
			0,00409472				

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

$$SPF = 9,2397 \times 0,00409472 \times 10$$

$$SPF = 0,37834$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0078	0,000117	9,2397	0,00322708	10	
295	0,0817	0,0071	0,00058007				
300	0,2874	0,0042	0,00120708				
305	0,3278	0,0022	0,00072116				
310	0,1864	0,0020	0,0003728				
315	0,0839	0,0023	0,00019297				
320	0,0180	0,0020	0,000036				
			0,00322708				

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

$$\text{SPF} = 9,2397 \times 0,00322708 \times 10$$

$$\text{SPF} = 0,298173$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,0079	0,0001185	9,2397	0,00342627	10	
295	0,0817	0,0069	0,00056373				
300	0,2874	0,0044	0,00126456				
305	0,3278	0,0023	0,00075394				
310	0,1864	0,0025	0,000466				
315	0,0839	0,0026	0,00021814				
320	0,0180	0,0023	0,0000414				
			0,00342627				

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

$$\text{SPF} = 9,2397 \times 0,00342627 \times 10$$

$$\text{SPF} = 0,316577$$

$$\text{Rata-rata formula I (basis)} = 0,331$$

Formula I (sediaan emulgel ekstrak 2%)**Replikasi I**

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1285	0,0019275	9,2397	0,08919444	10	
295	0,0817	0,1060	0,0086602				
300	0,2874	0,0921	0,02646954				
305	0,3278	0,0857	0,02809246				
310	0,1864	0,0832	0,01550848				
315	0,0839	0,0834	0,00699726				
320	0,0180	0,0855	0,001539				
			0,08919444				

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

$$\text{SPF} = 9,2397 \times 0,08919444 \times 10$$

$$\text{SPF} = 8,2413$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1286	0,001929	9,2397	0,08938125	10	
295	0,0817	0,1060	0,0086602				
300	0,2874	0,0925	0,0265845				
305	0,3278	0,0859	0,02815802				
310	0,1864	0,0832	0,01550848				
315	0,0839	0,0835	0,00700565				
320	0,0180	0,0853	0,0015354				
			0,08938125				

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

$$\text{SPF} = 9,2397 \times 0,08938125 \times 10$$

$$\text{SPF} = 8,2586$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1281	0,0019215	9,2397	0,08876116	10	
295	0,0817	0,1053	0,00860301				
300	0,2874	0,0919	0,02641206				
305	0,3278	0,0853	0,02796134				
310	0,1864	0,0824	0,01535936				
315	0,0839	0,0831	0,00697209				
320	0,0180	0,0851	0,0015318				
			0,08876116				

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

$$\text{SPF} = 9,2397 \times 0,08876116 \times 10$$

$$\text{SPF} = 8,2013$$

$$\text{Rata-rata formula II (sediaan ekstrak 2\%)} = 8,234$$

Formula III (sediaan emulgel ekstrak 3%)**Replikasi I**

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1602	0,002403	9,2397	0,13471227	10	
295	0,0817	0,1492	0,01218964				
300	0,2874	0,1412	0,04058088				
305	0,3278	0,1341	0,04395798				
310	0,1864	0,1262	0,02352368				
315	0,0839	0,1191	0,00999249				
320	0,0180	0,1147	0,0020646				
			0,13471227				

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

$$\text{SPF} = 9,2397 \times 0,13471227 \times 10$$

$$\text{SPF} = 12,4470$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1723	0,0025845	9,2397	0,14526146	10	
295	0,0817	0,1607	0,01312919				
300	0,2874	0,1526	0,04385724				
305	0,3278	0,1445	0,0473671				
310	0,1864	0,1361	0,02536904				
315	0,0839	0,1281	0,01074759				
320	0,0180	0,1226	0,0022068				
			0,14526146				

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

$$\text{SPF} = 9,2397 \times 0,14526146 \times 10$$

$$\text{SPF} = 13,4217$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,1763	0,0026445	9,2397	0,14877527	10	
295	0,0817	0,1644	0,01343148				
300	0,2874	0,1560	0,0448344				
305	0,3278	0,1481	0,04854718				
310	0,1864	0,1399	0,02607736				
315	0,0839	0,1305	0,01094895				
320	0,0180	0,1273	0,0022914				
			0,14877527				

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

$$\text{SPF} = 9,2397 \times 0,14877527 \times 10$$

$$\text{SPF} = 13,74639$$

$$\text{Rata-rata formula III (sediaan ekstrak 3\%)} = 13,205$$

Formula IV (sediaan emulgel ekstrak 5%)**Replikasi I**

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,3563	0,0053445	9,2397	0,27744462	10	
295	0,0817	0,3411	0,02786787				
300	0,2874	0,3275	0,0941235				
305	0,3278	0,2703	0,08860434				
310	0,1864	0,2106	0,03925584				
315	0,0839	0,2103	0,01764417				
320	0,0180	0,2558	0,0046044				
			0,27744462				

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

$$\text{SPF} = 9,2397 \times 0,27744462 \times 10$$

$$\text{SPF} = 25,63505$$

Replikasi II

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,3672	0,005508	9,2397	0,32119561	10	
295	0,0817	0,3514	0,02870938				
300	0,2874	0,3382	0,09719868				
305	0,3278	0,3214	0,10535492				
310	0,1864	0,3008	0,05606912				
315	0,0839	0,2809	0,02356751				
320	0,0180	0,2660	0,004788				
			0,32119561				

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

$$\text{SPF} = 9,2397 \times 0,32119561 \times 10$$

$$\text{SPF} = 29,67751$$

Replikasi III

λ	EE x I	Abs	EE x I x Abs	CF	\sum EE x I x Abs	FP	SPF
290	0,0150	0,3637	0,0054555	9,2397	0,31871959	10	
295	0,0817	0,3486	0,02848062				
300	0,2874	0,3357	0,09648018				
305	0,3278	0,3190	0,1045682				
310	0,1864	0,2984	0,05562176				
315	0,0839	0,2787	0,02338293				
320	0,0180	0,2628	0,0047304				
			0,31871959				

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

$$\text{SPF} = 9,2397 \times 0,31871959 \times 10$$

$$\text{SPF} = 29,44873$$

$$\text{Rata-rata formula IV (sediaan ekstrak 5\%)} = 28,354$$

Lampiran 21. Hasil Statistik SPSS SPF

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1Sebelum	.323	3	..	.879	3	.321
F2Sebelum	.354	3	..	.820	3	.164
F3Sebelum	.229	3	..	.981	3	.738
F4Sebelum	.366	3	.	.795	3	.102
F1Setelah	.301	3	..	.911	3	.422
F2Setelah	.268	3	..	.950	3	.571
F3Setelah	.292	3	..	.923	3	.463
F4Setelah	.367	3	.	.792	3	.096

a. Lilliefors Significance Correction

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 F1Sebelum - F1Setelah	.399700	.075181	.043406	-.212941	.586459	9.209	2	.012
Pair 2 F2Sebelum - F2Setelah	1.582467	.842994	.486703	-.511648	3.676581	3.251	2	.083
Pair 3 F3Sebelum - F3Setelah	2.090367	.142618	.082341	1.736084	2.444650	25.387	2	.002
Pair 4 F4Sebelum - F4Setelah	1.930733	.340351	.196502	1.085255	2.776212	9.826	2	.010

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