

Lampiran1. Perhitungan Formula Pembuatan *Lotion Sunscreen*

1. Formula 1 (5%)

$$\begin{aligned}\text{Minyak atsiri daun kemangi} &= \frac{5}{100} \times 30 \text{ ml} = 1,5 \text{ ml} \\ \text{Asam Stearat} &= \frac{5}{100} \times 30 \text{ ml} = 1,5 \text{ gram} \\ \text{Setil Alkohol} &= \frac{3}{100} \times 30 \text{ ml} = 0,9 \text{ gram} \\ \text{TEA} &= \frac{2}{100} \times 30 \text{ ml} = 0,6 \text{ ml} \\ \text{Parafin cair} &= \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml} \\ \text{Gliserin} &= \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml} \\ \text{Metil Paraben} &= \frac{0,01}{100} \times 30 \text{ ml} = 0,03 \text{ gram} \\ \text{Aquadest 100} &= 30 - (1,5+1,5+0,9+0,6+2,4+2,4+0,03) \\ &= 30 - 9,33 \\ &= 20,67 \\ &= 21 \text{ ml}\end{aligned}$$

2. Formula 2 (10%)

$$\begin{aligned}\text{Minyak atsiri daun kemangi} &= \frac{10}{100} \times 30 \text{ ml} = 3 \text{ ml} \\ \text{Asam Stearat} &= \frac{5}{100} \times 30 \text{ ml} = 1,5 \text{ gram} \\ \text{Setil Alkohol} &= \frac{3}{100} \times 30 \text{ ml} = 0,9 \text{ gram} \\ \text{TEA} &= \frac{2}{100} \times 30 \text{ ml} = 0,6 \text{ ml} \\ \text{Parafin cair} &= \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml} \\ \text{Gliserin} &= \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml} \\ \text{Metil Paraben} &= \frac{0,01}{100} \times 30 \text{ ml} = 0,03 \text{ gram} \\ \text{Aquadest 100} &= 30 - (1,5+1,5+0,9+0,6+2,4+2,4+0,03) \\ &= 30 - 10,83 \\ &= 19,17 \\ &= 20 \text{ ml}\end{aligned}$$

3. Formula 3 (15%)

$$\text{Minyak atsiri daun kemangi} = \frac{150}{100} \times 30 \text{ ml} = 4,5 \text{ ml}$$

$$\text{Asam Stearat} = \frac{5}{100} \times 30 \text{ ml} = 1,5 \text{ gram}$$

$$\text{Setil Alkohol} = \frac{3}{100} \times 30 \text{ ml} = 0,9 \text{ gram}$$

$$\text{TEA} = \frac{2}{100} \times 30 \text{ ml} = 0,6 \text{ ml}$$

$$\text{Parafin cair} = \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml}$$

$$\text{Gliserin} = \frac{8}{100} \times 30 \text{ ml} = 2,4 \text{ ml}$$

$$\text{Metil Paraben} = \frac{0,01}{100} \times 30 \text{ ml} = 0,03 \text{ gram}$$

$$\text{Aquadest 100} = 30 - (1,5+1,5+0,9+0,6+2,4+2,4+0,03)$$

$$= 30 - 12,33$$

$$= 17,67$$

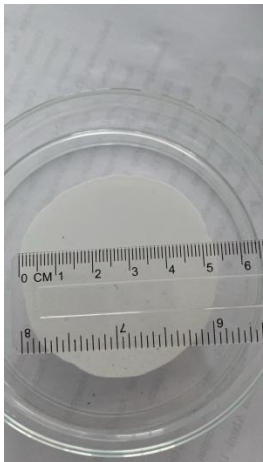
$$= 18 \text{ ml}$$

Lampiran 2. Pembuatan Sediaan *Sunscreen Lotion*

Gambar	Keterangan
	Penimbangan asam stearat
	Penimbangan setil alkohol
	Penimbangan parafin cair
	Penimbangan TEA

	Penimbangan gliserin
	Penimbangan Metil paraben

Lampiran 3. Pengujian Fisik

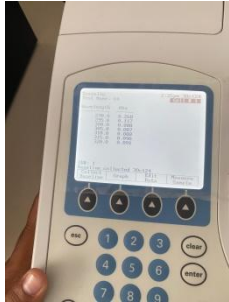
Gambar	Keterangan
	Pengujian pH
	Pengujian Homogenitas
	Pengujian Daya sebar

Lampiran 4 . Pengujian Iritasi



Lampiran 5 . Pengujian SPF

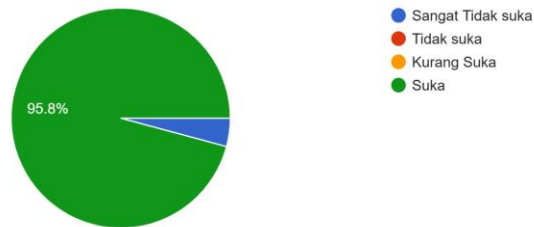
Gambar	Keterangan
	Penimbangan sediaan <i>sunscreen</i> lotion F1
	Penimbangan sediaan <i>sunscreen</i> lotion F2
	Penimbangan sediaan <i>sunscreen</i> lotion F3
	Campuran sediaan <i>sunscreen</i> lotion dengan etanol 96%

	Pengujian SPF dengan spektrofotometri

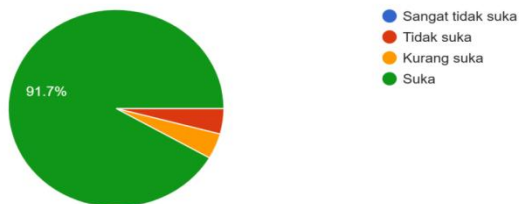
Lampiran 6 . Pengujian Hedonik

a. *Sunscreen Lotion* formula I

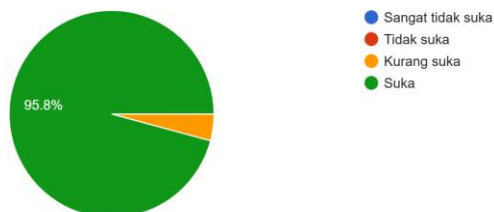
penilaian dari segi warna sediaan sunscreen lotion F1
24 responses



penilaian dari segi aroma sediaan sunscreen lotion F1
24 responses



penilaian dari segi homogenitas sediaan sunscreen lotion F1
24 responses

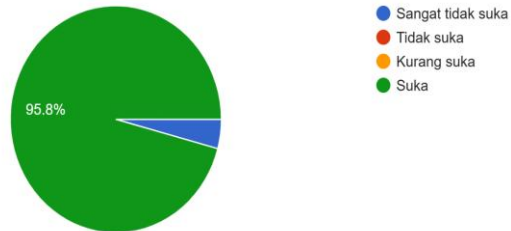


penilaian dari segi tekstur sediaan sunscreen lotion F1
24 responses

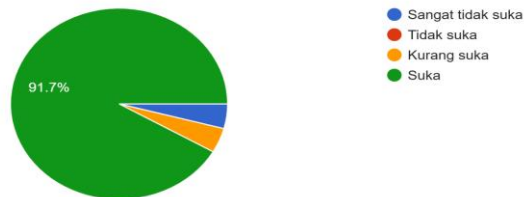


b. *Sunscreen Lotion* formula II

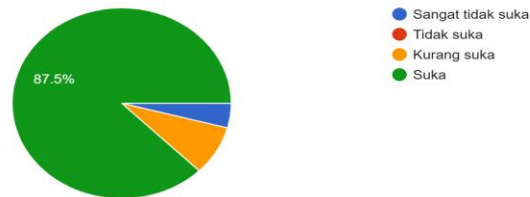
penilaian dari segi warna sediaan sunscreen lotion F2
24 responses



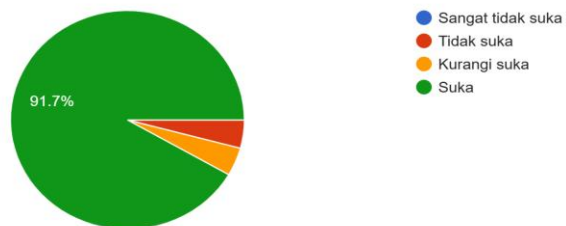
penilaian dari segi aroma sediaan sunscreen lotion F2
24 responses



penilaian dari segi homogenitas sediaan sunscreen lotion F2
24 responses



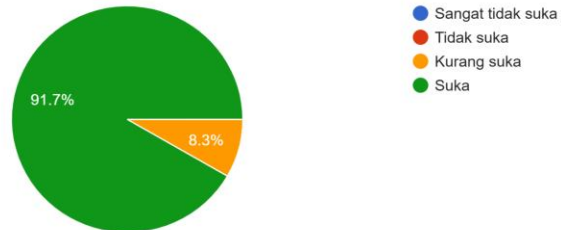
penilaian dari segi tekstur sediaan sunscreen yg lotion F2
24 responses



c. *Sunscreen Lotion* formula III

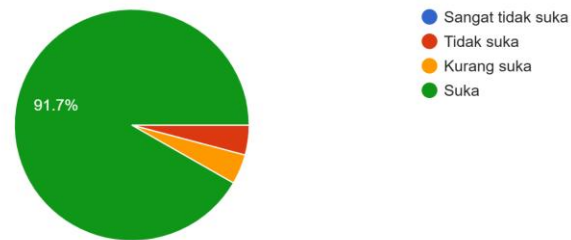
penilaian dari segi warna sediaan sunscreen lotion F3

24 responses



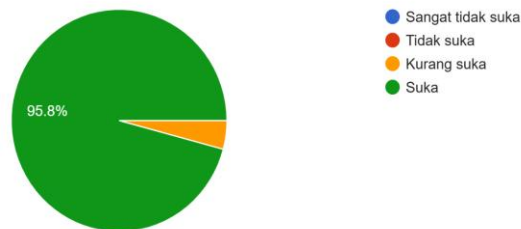
penilaian dari segi aroma sediaan sunscreen lotion F3

24 responses



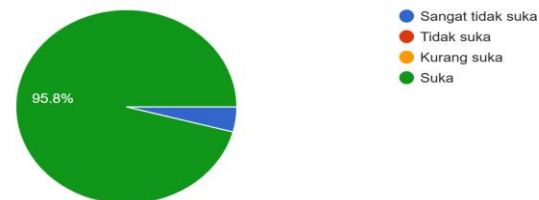
penilaian dari segi homogenitas sediaan sunscreen lotion F3

24 responses



penilaian dari segi testur sediaan lotion tabir surya F3

24 responses



Lampiran 7. Perhitungan Nilai SPF

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

Keterangan :

CF : Faktor korelasi

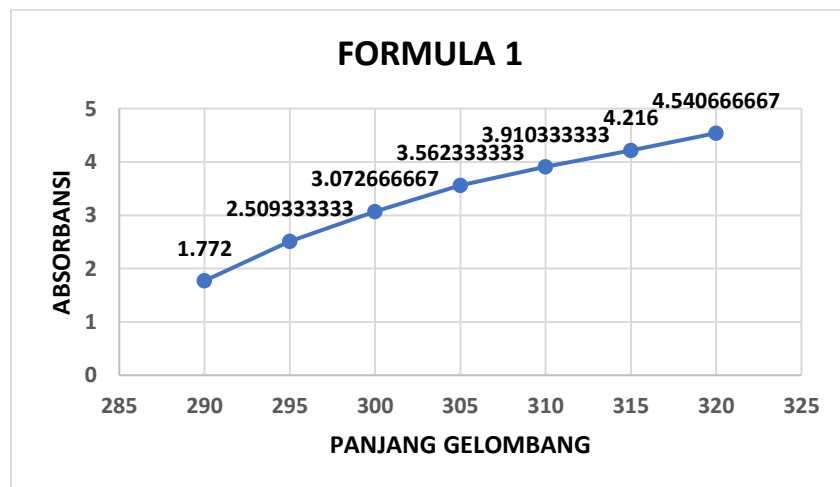
EE : Efisiensi Eritema

I : Spektrum simulasi sinar surya

Abs : Nilai serapan yang terbaca

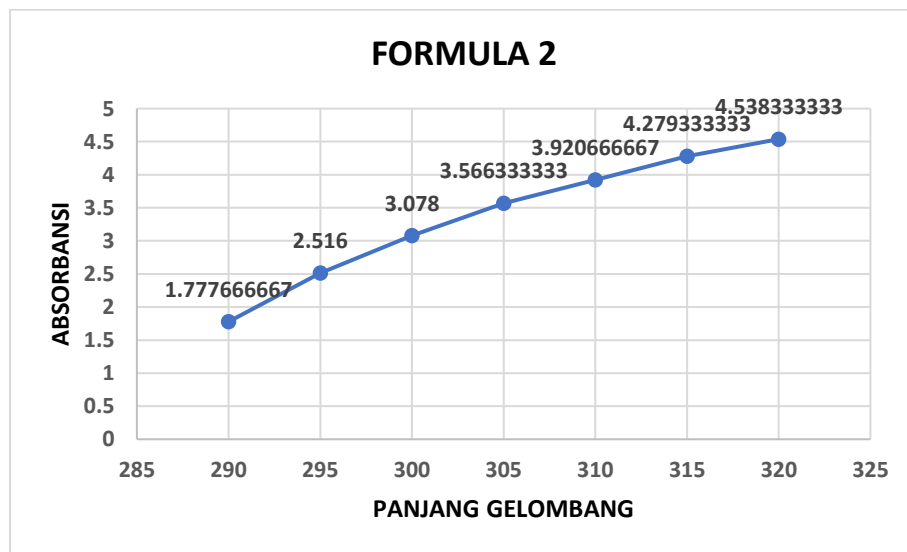
Perhitungan Formula 1

Panjang Gelombang	Replikasi 1	Replikasi 2	Replikasi 3	Rata-rata	EEXI	Hasil
290	1.779	1.77	1.767	1.772	0.05	0.088
295	2.523	2.492	2.513	2.5093333	0.082	0.205
300	3.128	3.056	3.034	3.0726667	0.287	0.881
305	3.669	3.488	3.53	3.5623333	0.328	1.168
310	3.922	3.866	3.943	3.9103333	0.186	0.727
315	4.158	4.247	4.243	4.216	0.084	0.354
320	4.535	4.66	4.427	4.5406667	0.018	0.081
					Rata- rata	0.492
					Nilai spf	4.92



Perhitungan Formula 2

Panjang Gelombang	Replikasi 1	Replikasi 2	Replikasi 3	Rata-rata	EEXI	Hasil
290	1.787	1.754	1.792	1.777667	0.05	0.088
295	2.537	2.513	2.498	2.516	0.082	0.206
300	3.095	3.07	3.069	3.078	0.287	0.883
305	3.61	3.571	3.518	3.566333	0.328	1.169
310	3.917	3.927	3.918	3.920667	0.186	0.729
315	4.339	4.306	4.193	4.279333	0.084	0.359
320	4.216	4.844	4.555	4.538333	0.018	0.081
					Rata- rata	0.493
					Nilai spf	4.93



Perhitungan Formula 3

Panjang Gelombang	Replikasi 1	Replikasi 2	Replikasi 3	Rata-rata	EEXI	Hasil
290	1.702	1.709	1.688	1.699667	0.05	0.084
295	2.472	2.445	2.455	2.457333	0.082	0.201
300	3.012	2.981	3.01	3.001	0.287	0.861
305	3.452	3.453	3.495	3.466667	0.328	1.137
310	3.819	3.849	3.856	3.841333	0.186	0.714
315	4.154	4.153	4.117	4.141333	0.084	0.347
320	4.394	4.564	4.62	4.526	0.018	0.081
					Rata- rata	0.497
					Nilai spf	4.97

