

LAMPIRAN

Lampiran 1. Perhitungan Sampel

1. Perhitungan persentase berat kering terhadap berat basah

$$\text{Berat daun kemangi basah} = 1500 \text{ g}$$

$$\text{Berat daun kemangi kering} = 355,29 \text{ g}$$

$$\text{Persentase} = \frac{\text{Berat daun kemangi kering}}{\text{Berat daun kemangi basah}} \times 100\%$$

$$= \frac{355,29 \text{ g}}{1500 \text{ g}} \times 100\%$$

$$= 23,686 \%$$

2. Perhitungan rendemen ekstrak daun kemangi

a. Metode Maserasi

$$\text{Berat sampel serbuk daun kemangi} = 100 \text{ g}$$

$$\text{Berat cawan porselen kosong} = 90,19 \text{ g (a)}$$

$$\text{Berat cawan porselen + ekstrak} = 125,9 \text{ g (b)}$$

$$\text{Berat ekstrak} = b - a$$

$$= 125,9 \text{ g} - 90,19 \text{ g}$$

$$= 35,8 \text{ g}$$

$$\text{Persentase rendemen} = \frac{\text{Berat ekstrak kental}}{\text{Berat sampel}} \times 100\%$$

$$= \frac{35,8 \text{ g}}{100 \text{ g}} \times 100\% = 35,8 \%$$

b. Metode Refluks

Berat sampel serbuk daun kemangi = 100 g

Berat cawan porselen kosong = 90,10 g (a)

Berat cawan porselen + ekstrak = 106,35 g (b)

Berat ekstrak = b-a

$$= 106,35 \text{ g} - 90,10 \text{ g}$$

$$= 16,25 \text{ g}$$

Persentase rendemen = $\frac{\text{Berat ekstrak kental}}{\text{Berat sampel}} \times 100\%$

$$= \frac{16,25 \text{ g}}{100 \text{ g}} \times 100\%$$

$$= 16,25\%$$

Lampiran 2. Perhitungan Penimbangan Bahan

$$\text{Ekstrak daun kemangi} = \frac{3}{100} \times 30 \text{ ml} = 0,9 \text{ ml}$$

$$\text{Propilenglikol 5\%} = \frac{5}{100} \times 30 \text{ ml} = 1,5 \text{ ml}$$

$$\text{Gliserin 10\%} = \frac{10}{100} \times 30 \text{ ml} = 3 \text{ ml}$$

$$\text{Parfum 1\%} = \frac{1}{100} \times 30 \text{ ml} = 0,3 \text{ ml}$$

$$\text{Etanol 96\%} = 30 \text{ ml} - (0,9\text{ml} + 1,5\text{ml} + 3\text{ml} + 0,3\text{ml})$$

$$= 30 \text{ ml} - 5,7 \text{ ml}$$

$$= 24,3 \text{ ml}$$

Lampiran 3. Perhitungan Uji Berat Jenis

Maserasi		Aquadest		Sampel	
Berat pikno kosong (aquadest)	Pikno + aquadest (g)	Massa air (g)	Berat pikno kosong (sampel)	Pikno + sampel (g)	Massa sampel (g)
	39,86 g	25,84 g		40,32 g	26,33 g
14,02	39,86 g	25,84 g	13,99 g	40,40 g	26,41 g
	39,86 g	25,84 g		40,46 g	26,47 g
Rata-rata	39,86 g	25,84 g	Rata-rata	40,39 g	26,40 g

Rumus :

$$p_{air} = \frac{W_1 - W_0}{V_{air}} \qquad p_{spray} = \frac{W_2 - W_0}{V_{spray}}$$

Keterangan :

p : bobot jenis (g/ml)

W₀ : bobot piknometer kosong

W₁ : bobot piknometer yang berisi air

W₂ : bobot piknometer berisi zat uji

V_{air} : volume air (ml)

V_{spray} : volume sediaan (ml)

Bj Aquadest

$$\begin{aligned}
 \text{air} &= \frac{W_1 - W_0}{V_{air}} \\
 &= \frac{39,86 \text{ g} - 14,02 \text{ g}}{25}
 \end{aligned}$$

$$= 1,0336 \text{ g/ml}$$

a. Metode Maserasi

Bj replikasi 1

$$\begin{aligned} p \text{ Spray} &= \frac{W_2 - W_o}{V_{\text{spray}}} \\ &= \frac{40,32 \text{ g} - 13,99 \text{ g}}{25} \\ &= 1,0532 \text{ g/ml} \end{aligned}$$

Bj replikasi 2

$$\begin{aligned} p \text{ Spray} &= \frac{W_2 - W_o}{V_{\text{spray}}} \\ &= \frac{40,40 \text{ g} - 13,99 \text{ g}}{25} \\ &= 1,0564 \text{ g/ml} \end{aligned}$$

Bj replikasi 3

$$\begin{aligned} p \text{ Spray} &= \frac{W_2 - W_o}{V_{\text{spray}}} \\ &= \frac{40,46 \text{ g} - 13,99 \text{ g}}{25} \\ &= 1,0588 \text{ g/ml} \end{aligned}$$

Refluks		Aquadest		Sampel	
Berat pikno kosong (aquadest)	Pikno + aquadest (g)	Massa air (g)	Berat pikno kosong (sampel)	Pikno + sampel (g)	Massa sampel (g)
	39,86 g	25,84 g		40,48 g	26,49 g
14,02	39,86 g	25,84 g	13,99 g	40,51 g	26,52 g
	39,86 g	25,84 g		40,53 g	26,54 g
Rata-rata	39,86 g	25,84 g	Rata-rata	40,50 g	26,51 g

b. Metode Refluks

Bj replikasi 1

$$\begin{aligned}
 p \text{ Spray} &= \frac{W_2 - W_0}{V_{\text{spray}}} \\
 &= \frac{40,48 \text{ g} - 13,99 \text{ g}}{25} \\
 &= 1,0596 \text{ g/ml}
 \end{aligned}$$

Bj replikasi 2

$$\begin{aligned}
 p \text{ Spray} &= \frac{W_2 - W_0}{V_{\text{spray}}} \\
 &= \frac{40,51 \text{ g} - 13,99 \text{ g}}{25} \\
 &= 1,0608 \text{ g/ml}
 \end{aligned}$$

Bj replikasi 3

$$\begin{aligned}
 p \text{ Spray} &= \frac{W_2 - W_0}{V_{\text{spray}}} \\
 &= \frac{40,53 \text{ g} - 13,99 \text{ g}}{25} \\
 &= 1,0616 \text{ g/ml}
 \end{aligned}$$

Lampiran 4. Perhitungan Uji Viskositas

Replikasi	t.air (detik)	Maserasi	Refluks
		t.sampel	t.sampel
1	0,76	01,16	01,29
2	0,79	01,24	01,30
3	0,82	01,29	01,36
Rata rata	0,79	01,23	01,31

Rumus :

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

Keterangan :

$\mu 1$: kekentalan air (0,8904 Cp)

$\mu 2$: kekentalan spray

T1 : waktu alir air dalam detik

T2 : waktu alir spray dalam detik

P1 : bobot jenis air (g/ml)

P2 : bobot jenis spray (g/ml)

a. Maserasi**Replikasi 1**

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,76}{1,0532 \times 01,16}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,7855}{1,2217}$$

$$0,7855 \times u \text{ sediaan} = 1,0878$$

$$= 1,3848 \text{ Cp}$$

Replikasi 2

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,79}{1,0564 \times 01,24}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,8165}{1,3099}$$

$$0,8165 \times u \text{ sediaan} = 1,1663$$

$$= 1,4284 \text{ Cp}$$

Replikasi 3

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,82}{1,0588 \times 01,29}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,8475}{1,3658}$$

$$0,8475 \times u \text{ sediaan} = 1,2161$$

$$= 1,4349 \text{ Cp}$$

b. Refluks

Replikasi 1

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,76}{1,0596 \times 01,29}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,7855}{1,3668}$$

$$0,7855 \times u \text{ sediaan} = 1,2169$$

$$= 1,5492 \text{ Cp}$$

Replikasi 2

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,79}{1,0608 \times 01,30}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,8165}{1,3790}$$

$$0,8165 \times u \text{ sediaan} = 1,2278$$

$$= 1,5037 \text{ Cp}$$

Replikasi 3

$$\frac{u \text{ air}}{u \text{ sediaan}} = \frac{p \text{ air} \times t \text{ air}}{p \text{ sediaan} \times t \text{ air}}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{1,0336 \times 0,82}{1,0616 \times 01,36}$$

$$\frac{0,8904}{u \text{ sediaan}} = \frac{0,8475}{1,4437}$$

$$0,8475 \times u \text{ sediaan} = 1,2854$$

$$= 1,5166 \text{ Cp}$$

Lampiran 5. Perhitungan Uji Kesukaan

Metode	Persentase kesukaan (%)				
	Netral	Agak suka	Suka	Amat suka	Amat sangat suka
Maserasi	5%	-	20%	30%	45%
Refluks	10%	25%	25%	20%	20%

a. Maserasi

$$\text{Netral} : 1 \text{ responden} = \frac{1}{20} \times 100\% = 5\%$$

$$\text{Agak suka} : 0 \text{ responden} = \text{Tidak ada}$$

$$\text{Suka} : 4 \text{ responden} = \frac{4}{20} \times 100\% = 20\%$$

$$\text{Amat suka} : 6 \text{ responden} = \frac{6}{20} \times 100\% = 30\%$$

$$\text{Amat sangat suka} : 9 \text{ responden} = \frac{9}{20} \times 100\% = 45\%$$

b. Refluks

$$\text{Netral} : 2 \text{ responden} = \frac{2}{20} \times 100\% = 10\%$$

$$\text{Agak suka} : 5 \text{ responden} = \frac{5}{20} \times 100\% = 25\%$$

$$\text{Suka} : 5 \text{ responden} = \frac{5}{20} \times 100\% = 25\%$$

$$\text{Amat suka} : 4 \text{ responden} = \frac{4}{20} \times 100\% = 20\%$$

$$\text{Amat sangat suka} : 4 \text{ responden} = \frac{4}{20} \times 100\% = 20\%$$

Lampiran 6. Uji Statistik Data

a. Berat Jenis

Test of Homogeneity of Variances

BeratJenis

Levene Statistic	df1	df2	Sig.
1.926	1	4	.237

ANOVA

BeratJenis

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	1	.000	6.922	.058
Within Groups	.000	4	.000		
Total	.000	5			

Descriptives

BeratJenis

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
maserasi	3	1.0561	.00281	.00162	1.0492	1.0631	1.05	1.06	
refluks	3	1.0607	.00101	.00058	1.0582	1.0632	1.06	1.06	
Total	6	1.0584	.00312	.00127	1.0551	1.0617	1.05	1.06	
Model			.00211	.00086	1.0560	1.0608			
Fixed Effects									
Random Effects				.00227	1.0296	1.0872			.00001

b. Viskositas

Test of Homogeneity of Variances

viskositas

Levene Statistic	df1	df2	Sig.
.190	1	4	.686

ANOVA

viskositas

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.017	1	.017	26.648	.007
Within Groups	.003	4	.001		
Total	.020	5			

Descriptives

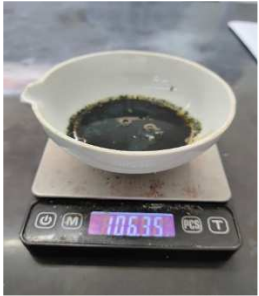
viskositas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
maserasi	3	1.4160	.02724	.01573	1.3484	1.4837	1.38	1.43	
refluks	3	1.5232	.02345	.01354	1.4649	1.5814	1.50	1.55	
Total	6	1.4696	.06293	.02569	1.4036	1.5356	1.38	1.55	
Model			.02542	.01038	1.4408	1.4984			
Fixed Effects									
Random Effects				.05357	.7890	2.1502			.00552

Lampiran 7. Dokumentasi Proses Penelitian

No	Gambar	Keterangan
1		Daun kemangi (<i>Ocimum Basilicum</i> L.)
2		Pencucian daun kemangi (<i>Ocimum Basilicum</i> L.)
3		Pengeringan daun kemangi (<i>Ocimum Basilicum</i> L.)
4		Proses penghalusan daun kemangi (<i>Ocimum Basilicum</i> L.)

No	Gambar	Keterangan
5		Pengayakan serbuk simplisia daun kemangi (<i>Ocimum Basilicum L.</i>)
6		Penimbangan serbuk simplisia daun kemangi (<i>Ocimum Basilicum L.</i>)
7		Proses maserasi selama 5 hari
8		Proses ekstraksi refluks

No	Gambar	Keterangan
9		Penyaringan ekstra daun kemangi (<i>Ocimum Basilicum L.</i>)
10		Hasil ekstrak daun kemangi (<i>Ocimum Basilicum L.</i>)
11		Uji bebas etanol
12		Uji senyawa flavonoid

No	Gambar	Keterangan
13		Pembuatan <i>deodorant spray</i> ekstrak daun kemangi (<i>Ocimum Basilicum</i> L.)
14		Sediaan <i>deodorant spray</i> ekstrak daun kemangi (<i>Ocimum Basilicum</i> L.)
15		Uji pH
16		Uji Berat jenis

No	Gambar	Keterangan
17		Uji Viskositas
18		Uji Kesukaan responden

Lampiran 8. Hasil Kuisisioner

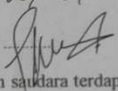
Data Quisioner

Nama : DHYAH K.S

Umur : 20

Jenis kelamin : Perempuan

Tanggal : 26/02/2025

Tanda tangan : 

Dihadapan saudara terdapat 2 sampel sediaan deodorant spray, saudara diminta untuk memberikan penilaian berdasarkan kesan kesukaan. Kisaran nilai yang dapat diberikan 1-9. Semakin tinggi nilai yang diberikan maka semakin tinggi nilai kesukaan.

Kode Sampel	Nilai
Sampel A	7
Sampel B	5

Keterangan :

Sampel A : Ekstraksi Maserasi

Sampel B : Ekstraksi Refluks

Penilaian :

1 : Amat sangat tidak suka	6 : Agak suka
2 : Amat sangat tidak suka	7 : Suka
3 : Tidak suka	8 : Amat suka
4 : Agak tidak suka	9 : Amat sangat suka
5 : Netral	

CURRICULUM VITAE



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Jenis Kelamin	: Perempuan
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Riwayat Pendidikan	
SD	: SDN Sindangpanji III
SMP	: SMP Negeri 1 Cikijing
SMA/K Sederajat	: SMK Negeri 2 Kuningan
DIII	: Politeknik Harapan Bersama Tegal
Nama Ayah	: Wawan. H
Nama Ibu	: Iin. H
Pekerjaan Ayah	: Wiraswasta
Pekerjaan Ibu	: Ibu Rumah Tangga
Judul/Penelitian	: Pengaruh metode ekstraksi terhadap uji sifat fisik formula <i>deodorant spray</i> ekstrak daun kemangi (<i>Ocimum basilicum</i> L)"