

LAMPIRAN

Lampiran 1.

Perhitungan Rendamen

Rendamen ekstrak ampas teh hitam (*Black tea*)

Berat *Beaker glass* = 157, 52 gram (c)

Berat sampel = 240 gram (x)

Berat sampel + berat *beaker glass* = 396,52 gram (b)

Berat ekstrak = b-c

$$= 396,52 - 157,52$$

$$= 239 \text{ gram} = 239 \text{ ml}$$

$$R = \frac{y}{x} \times 100\%$$

$$= \frac{239}{240} \times 100\%$$

$$= 99,5\% \text{ b/v}$$

Lampiran 2.

Perhitungan Penimbangan Bahan

⌘ Formula 1

No	Formula	Konsentrasi (%)	Perhitungan
1	Ekstrak Ampas Teh Hitam	10%	$\frac{10}{100} \times 250 = 25 \text{ ml}$
2	Sodium Lauryl Sulfat (SLS)	9%	$\frac{9}{100} \times 250 = 22,5 \text{ g}$
3	Na ₂ SO ₄	6%	$\frac{6}{100} \times 250 = 15 \text{ g}$
4	Asam sitrat	1,5%	$\frac{1,5}{100} \times 250 = 3,75 \text{ g}$
5	Foam booster	1,1%	$\frac{1,1}{100} \times 250 = 2,75 \text{ g}$
6	Sodium tripolyphosphate (STTP)	2%	$\frac{2}{100} \times 250 = 5 \text{ g}$
7	Parfum	0,1	$\frac{0,1}{100} \times 250 = 0,25 \text{ g ml}$
8	Aquadest	Ad 250 ml	Ad 250 ml

⌘ Formula 2

No	Formula	Konsentrasi (%)	Perhitungan
1	Ekstrak Ampas Teh Hitam	10%	$\frac{10}{100} \times 250 = 25 \text{ ml}$
2	Sodium Lauryl Sulfat (SLS)	9%	$\frac{9}{100} \times 250 = 22,5 \text{ g}$
3	Na ₂ SO ₄	6%	$\frac{6}{100} \times 250 = 15 \text{ g}$
4	Asam sitrat	1,5%	$\frac{1,5}{100} \times 250 = 3,75 \text{ g}$
5	Foam booster	1,1%	$\frac{1,1}{100} \times 250 = 2,75 \text{ g}$

6	Sodium tripolyphosphate (STTP)	6%	$\frac{6}{100} \times 250 = 15 \text{ g}$
7	Parfum	0,1	$\frac{0,1}{100} \times 250 = 0,25 \text{ g ml}$
8	Aquadest	Ad 250 ml	Ad 250 ml

∅ Formula 3

No	Formula	Konsentrasi (%)	Perhitungan
1	Ekstrak Ampas Teh Hitam	10%	$\frac{10}{100} \times 250 = 25 \text{ ml}$
2	Sodium Lauryl Sulfat (SLS)	9%	$\frac{9}{100} \times 250 = 22,5 \text{ g}$
3	Na ₂ SO ₄	6%	$\frac{6}{100} \times 250 = 15 \text{ g}$
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5	Foam booster	1,1%	$\frac{1,1}{100} \times 250 = 2,75 \text{ g}$
6	Sodium tripolyphosphate (STTP)	10%	$\frac{10}{100} \times 250 = 25 \text{ g}$
7	Parfum	0,1	$\frac{0,1}{100} \times 250 = 0,25 \text{ g ml}$
8	Aquadest	Ad 250 ml	Ad 250 ml

Lampiran 3.**Pembuatan Ekstrak Ampas Teh Hitam**

NO	Gambar	Keterangan
1		Ampas teh hitam yang sudah di timbang
2		Proses maserasi ampas teh hitam
3		Penyaringan filtrat ampas teh hitam

Lampiran 4.

Penimbangan bahan pada sediaan *handwash*

No	Gambar	Keterangan
1		Penimbangan Sodium tripolyphosphate (STTP)
2		Penimbangan asam sitrat
3		Penimbangan Sodium Sulfat (Na_2SO_4)
4		Penimbangan Sodium Lauryl Sulfat (SLS)

No	Gambar	Keterangan
5		Pengambilan Foam Booster

Lampiran 5.

Pembuatan sediaan *handwash*

No	Gambar	Keterangan
1		Pencampuran Sodium Lauryl Sulfat (SLS) dengan Foam Booster
2		Pembuatan campuran 2 yaitu sodium sulfat (Na_2SO_4) dengan ekstrak ampas the (campuran satu)
3		Melarutkan STTP ke dalam beaker glass terpisah, yang kemudian akan dicampurkan kedalam campuran satu.
4		Proses melarutkan asam sitrat yang akan dimasukkan kedalam campuran satu.

Lampiran 6.

Hasil Uji Sifat Fisik Sediaan *Handwash*

No	Gambar	Keterangan
1		Uji pH
2		Uji Viskositas
3		Uji Homogenitas
4		Uji Tinggi Busa

No	Gambar	Keterangan
5	 A digital scale with a glass bottle on top. The scale's display shows '48.86 g'. The brand name 'SUNYU' is visible on the bottom right of the scale's face. The bottle contains a yellow liquid.	Uji Bobot Jenis

Lampiran 7.

a. Perhitungan Bobot Jenis

Formula 1

1. Replikasi I

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 48,25 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{\text{air}} = \frac{48,25 - 22,94}{25} = 1,012 \text{ g/ml}$$

2. Replikasi II

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 48,24 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{\text{air}} = \frac{48,24 - 22,94}{25} = 1,012 \text{ g/ml.}$$

3. Replikasi III

$$\text{Pikno kosong} = 22,94$$

$$\text{Pikno kosong + isi} = 48,24$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{\text{air}} = \frac{48,24 - 22,94}{25} = 1,012 \text{ g/ml.}$$

Formula 2

1. Replikasi I

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 48,84 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{air} = \frac{48,86-22,94}{25} = 1,036 \text{ g/ml.}$$

2. Replikasi II

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + air} = 48,84 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{air} = \frac{48,84-22,94}{25} = 1,036 \text{ g/ml.}$$

3. Replikasi III

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 48,85 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{air} = \frac{48,85-22,94}{25} = 1,036 \text{ g/ml.}$$

Formulasi 3

1. Replikasi I

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 49,80 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{air} = \frac{49,80-22,94}{25} = 1,074 \text{ g/ml.}$$

2. Replikasi II

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 49,79 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{air} = \frac{49,79-22,94}{25} = 1,074 \text{ g/ml.}$$

3. Replikasi III

$$\text{Pikno kosong} = 22,94 \text{ g}$$

$$\text{Pikno kosong + isi} = 49,79 \text{ g}$$

$$\text{Volume piknometer} = 25 \text{ ml}$$

$$\rho_{\text{air}} = \frac{49,79 - 22,94}{25} = 1,074 \text{ g/ml.}$$

b. Perhitungan tinggi Busa

1. Formula I

$$\text{Tinggi busa awal} = 8,1 \text{ cm}$$

$$\text{Tinggi busa akhir} = 7,7 \text{ cm}$$

$$\begin{aligned} \text{Uji busa} &= \frac{\text{Tinggi busa akhir}}{\text{Tinggi busa awal}} \times 100\% \\ &= \frac{7,7 \text{ cm}}{8,1} \times 100\% \\ &= 95\% \end{aligned}$$

2. Formula II

$$\text{Tinggi busa awal} = 8,1 \text{ cm}$$

$$\text{Tinggi busa akhir} = 7,5 \text{ cm}$$

$$\begin{aligned} \text{Uji busa} &= \frac{\text{Tinggi busa akhir}}{\text{Tinggi busa awal}} \times 100\% \\ &= \frac{7,5 \text{ cm}}{8,1} \times 100\% \\ &= 92\% \end{aligned}$$

3. Formula III

$$\text{Tinggi busa awal} = 9,8 \text{ cm}$$

$$\text{Tinggi busa akhir} = 8,7 \text{ cm}$$

$$\begin{aligned}\text{Uji busa} &= \frac{\textit{Tinggi busa akhir}}{\textit{Tinggi busa awal}} \times 100\% \\ &= \frac{8,7 \textit{ cm}}{9,8 \textit{ cm}} \times 100\% \\ &= 88\%\end{aligned}$$

Lampiran 8.

Analisis ANOVA *One-way*

1. ANOVA Viskoitas

Test of Homogeneity of Variances

Viskositas

Levene Statistic	df1	df2	Sig.
15.146	2	6	.005

ANOVA

Viskositas

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	78908.667	2	39454.333	37.675	.000
Within Groups	6283.333	6	1047.222		
Total	85192.000	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Viskositas

Bonferroni

(I) Perla kuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
f11	f2	-29.333	26.422	.928	-116.20	57.53
	f3	-211.667*	26.422	.001	-298.53	-124.80
f2	f11	29.333	26.422	.928	-57.53	116.20
	f3	-182.333*	26.422	.001	-269.20	-95.47
f3	f11	211.667*	26.422	.001	124.80	298.53
	f2	182.333*	26.422	.001	95.47	269.20

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

2. ANOVA Bobot Jenis

Test of Homogeneity of Variances

Bobot_jeniis

Levene Statistic	df1	df2	Sig.
2.667	2	6	.148

ANOVA

Bobot_jeniis

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.663	2	1.831	27470.167	.000
Within Groups	.000	6	.000		
Total	3.663	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Bobot_jeniis

Bonferroni

(I) Perla kuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
f1	f2	-.60333*	.00667	.000	-.6252	-.5814
	f3	-1.55000*	.00667	.000	-1.5719	-1.5281
f2	f1	.60333*	.00667	.000	.5814	.6252
	f3	-.94667*	.00667	.000	-.9686	-.9248
f3	f1	1.55000*	.00667	.000	1.5281	1.5719
	f2	.94667*	.00667	.000	.9248	.9686

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

3. ANOVA Tinggi Busa

Test of Homogeneity of Variances

Tinggi_busa

Levene Statistic	df1	df2	Sig.
4.364	2	6	.068

ANOVA

Tinggi_busa

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.896	2	2.948	80.394	.000
Within Groups	.220	6	.037		
Total	6.116	8			

Oneway

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Tinggi_busa

Bonferroni

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
f1	f2	.0333	.1563	1.000	-.481	.547
	f3	-1.7000*	.1563	.000	-2.214	-1.186
f2	f1	-.0333	.1563	1.000	-.547	.481
	f3	-1.7333*	.1563	.000	-2.247	-1.219
f3	f1	1.7000*	.1563	.000	1.186	2.214
	f2	1.7333*	.1563	.000	1.219	2.247

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

CURICULUM VITAE



Nama : Lulu Ilmaknun
 NIM : 22080074
 Jenis Kelamin : Perempuan
 TTL : Tegal, 22 Januari 2004
 Alamat : Jalan Nusa Indah No.246 Desa Purbayasa
 No Telepon/Hp : 0856-4078-6112
 Riwayat Pendidikan
 SD : SDN Purbayasa
 SMP : SMPN 1 Pangkah
 SMA : SMAN 1 Pangkah
 DIPLOMA III : Farmasi
 Nama Ayah : Surip
 Nama Ibu : Eni Ratmawati
 Pekerjaan Ayah : PNS
 Pekerjaan Ibu : Ibu Rumah Tangga
 Alamat : Jalan Nusa Indah No. 246 Desa Purbayasa
 Judul Penelitian : Pengaruh Konsentrasi Sodium Tripolyphosphate (STTP)
 Terhadap Sifat Fisik Sediaan *Handwash* dari Ekstrak
 Ampas Teh Hitam (*Black tea*)

Tegal, 1 Maret 2025
 Mahasiswa,

Lulu Ilmaknun
 22080074