

LAMPIRAN

Lampiran 1. Proses pembuatan ekstrak



Gambar 1. Serbuk simplisia



Gambar 2. Proses meserasi



Gambar 3. Proses penguapan



Gambar 4. Ekstrak kental



Gambar 5. Proses dekslorofilasi



Gambar 6. Proses Penguapan



Gambar 7. Ekstrak kental

Lampiran 2. Perhitungan rendemen serbuk dan rendemen ekstrak kental daun Kelor (*Moringa oleifera* L)

1. Rendemen serbuk simplisia = 1600g
Bobot sampel segar = 200 g
Rendemen serbuk simplisia = $\frac{200\text{ g}}{1600\text{ g}} \times 100\%$
= 12,5 %
2. Rendemen ekstrak
Bobot cawan = 70,05 g
Bobot cawan tambah + ekstrak = 100,27 g
Bobot ekstrak = 100,27 g - 73,03 g
= 30,22 g
Rendemen ekstrak = $\frac{30,22}{200} \times 100\%$
= 15,11 %
3. Rendemen ekstrak terdeklorofilasi
Bobot cawan = 70,05 g
Bobot cawan + ekstrak = 93,40 g
Bobot ekstrak = 23,35 g
Rendemen ekstrak terdeklorofilasi = $\frac{23,35}{200} \times 100\%$
= 11,67 %

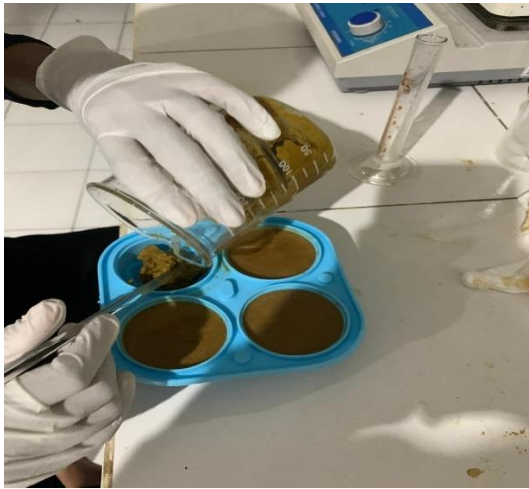
Lampiran 3. Proses pembuatan sabun



Gambar 8. Penyiapan alat dan bahan sabun



Gambar 9. Proses pembuatan sabun



Gambar 10. Pencetakan sabun



Gambar 11. Hasil formula 1 dan 2

Lampiran 4. Organoleptis

sampel	Parameter organoleptic		
	Warna	Bentuk	Bau
F1R1	Cokelat pucat	Padat	Minyak zaitun
F1R2	Cokelat pucat	Padat	Minyak zaitun
F1R3	Cokelat pucat	Padat	Minyak zaitun
F2R1	Cokelat	Padat	Minyak zaitun
F2R2	Cokelat	Padat	Minyak zaitun
F2R3	Cokelat	Padat	Minyak zaitun

Lampiran 5. Pengujian kadar air



Gambar 12. Penimbangan cawan



Gambar 13. Penimbangan sampel



Gambar 14. Proses pengeringan



Gambar 15. Proses pendinginan



Gambar 16. Penimbangan hasil pengeringan

Lampiran 6. Hasil Pengujian Kadar Air

Sampel	W1	W2	W3	W4	W5
F1R1	23,32	21,92	21,64	21,30	21,14
F1R2	23,41	21,97	21,65	21,42	20,75
F1R3	32,28	30,59	30,33	30,09	30,05
F2R1	57,20	55,73	55,48	55,18	55,10
F2R2	56,65	55,24	55,01	54,69	54,55
F2R3	54,95	53,61	53,34	53,03	52,85

1. Formula 1 replikasi 1

Bobot cawan kosong = 18,32 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 23,32 g (b_1)

Bobot cawan + sampel uji setelah pengeringan = 21,92 g (b_2)

$$\begin{aligned}\text{Hasil \% kadar air} &= \frac{23,32-21,92}{23,32-18,32} \times 100 \% \\ &= \frac{1,4}{5} \times 100\% \\ &= 28 \%\end{aligned}$$

2. Formula 1 replikasi 2

Bobot cawan kosong = 18,41 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 23,41 g (b_1)

Bobot cawan + sampel uji setelah pengeringan = 21,97 g (b_2)

$$\begin{aligned}\text{Hasil \% kadar air} &= \frac{23,41-21,97}{23,41-18,41} \times 100 \% \\ &= \frac{1,44}{5} \times 100 \% \\ &= 28.8 \%\end{aligned}$$

3. Formula 1 replikasi 3

Bobot cawan kosong = 27,28 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 32,28 g (b_1)

Bobot cawan + sampel uji setelah pengeringan = 30,59 g (b_2)

$$\begin{aligned}\text{Hasil \% kadar air} &= \frac{32,28-30,59}{5} \times 100\% \\ &= \frac{1,69}{5} \times 100\% \\ &= 33,8 \%\end{aligned}$$

4. Formula 2 replikasi 1

Bobot cawan kosong = 52,20 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 57,20 g (b_1)

Bobot cawan + sampel uji setelah pengeringan = 55,73 g (b_2)

$$\begin{aligned}\text{Hasil \% kadar air} &= \frac{57,20-55,73}{5} \times 100\% \\ &= \frac{1,47}{5} \times 100\% \\ &= 29,4 \%\end{aligned}$$

5. Formula 2 replikasi 2

Bobot cawan kosong = 51,65 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 56,65 g (b_1)

Bobot cawan + sampel uji setelah pengeringan = 55,24 g (b_2)

$$\begin{aligned}\text{Hasil \% kadar air} &= \frac{56,65-55,24}{5} \times 100\% \\ &= \frac{1,41}{5} \times 100\%\end{aligned}$$

$$= 28,2 \%$$

6. Formula 2 replikasi 3

Bobot cawan kosong = 49,95 g (b_0)

Bobot cawan + sampel sebelum pengeringan = 54,95 g (b_1)

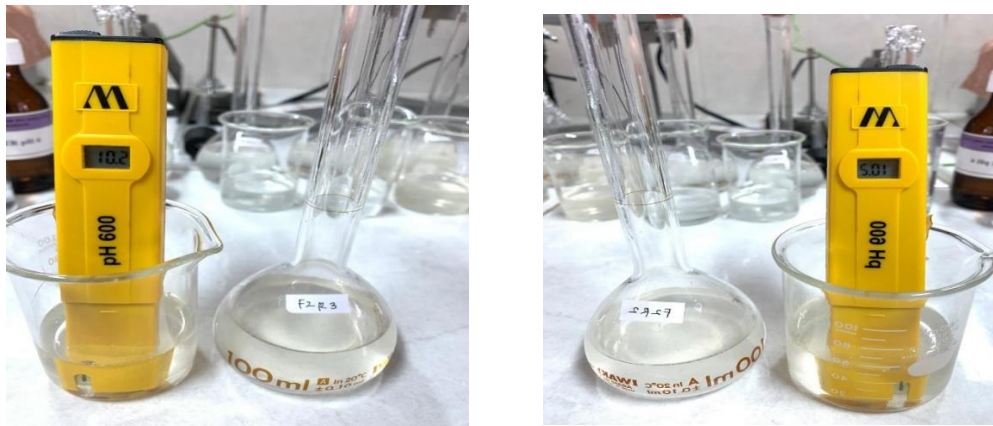
Bobot cawan + sampel uji setelah pengeringan = 53,61 g (b_2)

$$\text{Hasil \% kadar air} = \frac{54,95 - 53,61}{5} \times 100\%$$

$$= \frac{1,34}{5} \times 100\%$$

$$= 26,8 \%$$

Lampiran 7. Uji pH 0,1%



Gambar 17. Hasil uji pH sabun

Lampiran 8. Hasil pengujian bahan tak larut etanol



Gambar 18. Pemanasan larutan uji **Gambar 19.** Pengeringan kertas saring



Gambar 20. Proses penyaringan **Gambar 21.** Proses penimbangan kertas saring



Gambar 22. Hasil uji bahan tak larut etanol

Lampiran 9. Hasil pengujian bahan tak larut etanol

Sampel	W1	W2	W3
F1R1	1,75	1,71	2,04
F1R2	1,65	1,63	2,03
F1R3	1,98	1,95	2,07
F2R1	1,97	1,96	2,07
F2R2	1,72	1,71	2,03
F2R3	1,95	1,92	2,04

- 1) Formula 1 replikasi 1
Bobot kertas saring = 1,71(b_0)
Bobot contoh uji = 5 g (b_1)
Bobot kertas saring + residu = 2,04g (b_2)

$$\begin{aligned}\text{Bobot tak larut etanol} &= \frac{2,04-1,71}{5} \times 100 \\ &= \frac{0,33}{5} \times 100 \\ &= 6,6\%\end{aligned}$$

2) Formula 1 replikasi 2

$$\begin{aligned}\text{Bobot kertas saring} &= 1,63(b_0) \\ \text{Bobot contoh uji} &= 5 \text{ g } (b_1) \\ \text{Bobot kertas saring + residu} &= 2,03 \text{ g } (b_2) \\ \text{Bobot tak larut etanol} &= \frac{2,03-1,63}{5} \times 100 \\ &= \frac{0,4}{5} \times 100 \\ &= 8\%\end{aligned}$$

3) Formula 1 replikasi 3

$$\begin{aligned}\text{Bobot kertas saring} &= 1,95(b_0) \\ \text{Bobot contoh uji} &= 5 \text{ g } (b_1) \\ \text{Bobot kertas saring + residu} &= 2,07 \text{ g } (b_2) \\ \text{Bobot tak larut etanol} &= \frac{2,07-1,95}{5} \times 100 \\ &= \frac{0,12}{5} \times 100 \\ &= 2,4\%\end{aligned}$$

4) Formula 2 replikasi 1

$$\begin{aligned}\text{Bobot kertas saring} &= 1,96(b_0) \\ \text{Bobot contoh uji} &= 5 \text{ g } (b_1) \\ \text{Bobot kertas saring + residu} &= 2,07 \text{ g } (b_2) \\ \text{Bobot tak larut etanol} &= \frac{2,07-1,96}{5} \times 100 \\ &= \frac{0,11}{5} \times 100 \\ &= 2,2\%\end{aligned}$$

5) Formula 2 replikasi 2

$$\begin{aligned}\text{Bobot kertas saring} &= 1,71(b_0) \\ \text{Bobot contoh uji} &= 5 \text{ g } (b_1) \\ \text{Bobot kertas saring + residu} &= 2,03 \text{ g } (b_2) \\ \text{Bobot tak larut etanol} &= \frac{2,03-1,71}{5} \times 100 \\ &= \frac{0,32}{5} \times 100 \\ &= 6,4\%\end{aligned}$$

6) Formula 2 replikasi 3

$$\begin{aligned}\text{Bobot kertas saring} &= 1,92(b_0) \\ \text{Bobot contoh uji} &= 5 \text{ g } (b_1) \\ \text{Bobot kertas saring + residu} &= 2,04 \text{ g } (b_2) \\ \text{Bobot tak larut etanol} &= \frac{2,04-1,92}{5} \times 100\end{aligned}$$

$$= \frac{0,12}{5} \times 100$$

$$= 2,4\%$$

Lampiran 10. Uji Alkali Bebas

Sampel	F1R1	F1R2	F1R3	F2R1	F2R2	F2R3
V	2,5 ml	2,3 ml	2,6 ml	2,4 ml	2,2 ml	2,4 ml

N = 0,1 N

b = 5 g = 5000 mg

$$\text{Alkali bebas} = \frac{40 \times v \times N}{b} \times 100$$

1. Formula 1 Replikasi 1

$$\text{Alkali bebas} = \frac{40 \times 2,5 \times 0,1}{5000} \times 100$$

$$= 0,2$$

2. Formula 1 Replikasi 2

$$\text{Alkali bebas} = \frac{40 \times 2,3 \times 0,1}{5000} \times 100$$

$$= 0,184$$

3. Formula 1 Replikasi 3

$$\text{Alkali bebas} = \frac{40 \times 2,6 \times 0,1}{5000} \times 100$$

$$= 0,208$$

4. Formula 2 Replikasi 1

$$\text{Alkali bebas} = \frac{40 \times 2,4 \times 0,1}{5000} \times 100$$

$$= 0,192$$

5. Formula 2 Replikasi 2

$$\text{Alkali bebas} = \frac{40 \times 2,2 \times 0,1}{5000} \times 100$$

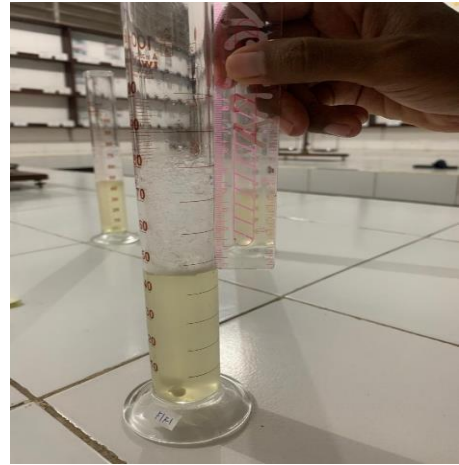
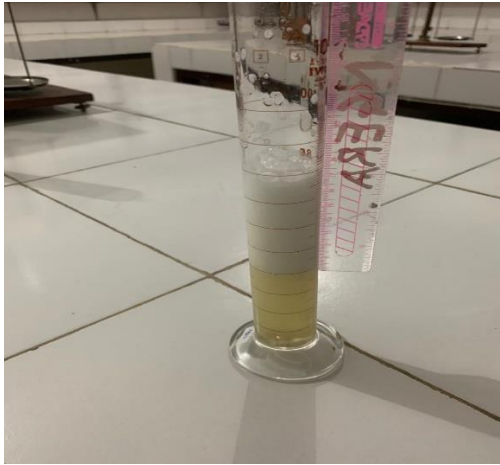
$$= 0,176$$

6. Formula 2 Replikasi 3

$$\text{Alkali bebas} = \frac{40 \times 2,4 \times 0,1}{5000} \times 100$$

$$= 0,192$$

Lampiran 11 . Uji stabilitas busa



Gambar 23. Hasil uji stabilitas busa