

LAMPIRAN

Lampiran 1. Preparasi dan Ekstraksi Daun Pelawan



Gambar 1. Proses pengeringan sampel



Gambar 2. Daun di blender



Gambar 3. Proses menyaring serbuk



Gambar 4. Serbuk daun pelawan



Gambar 5. Proses maserasi



Gambar 6. Proses evaporasi hasil maserasi.



Gambar 7. Ekstrak kental daun pelawan

Lampiran 2. Proses Fraksinasi



Gambar 8. Fraksinasi MeOH : Air



Gambar 9. Hasil fraksinasi MeOH :Air.



Gambar 10. Fraksinasi n-heksana



Gambar 11. Hasil fraksinasi n-heksana



Gambar 12. Fraksinasi etil asetat



Gambar 13. Hasil fraksinasi etil asetat



Gambar 14. Proses evaporasi hasil fraksinasi



Gambar 15. Ekstrak kental Fraksi MeOH:air

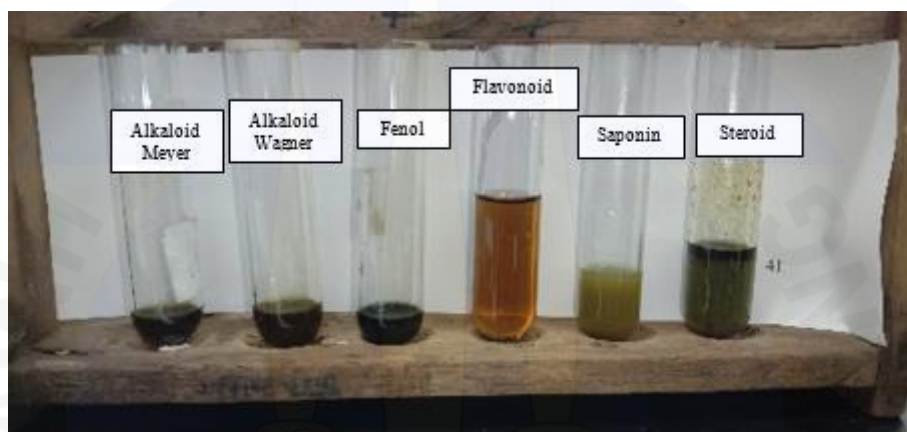


Gambar 16. Ekstrak kental fraksi n-heksana

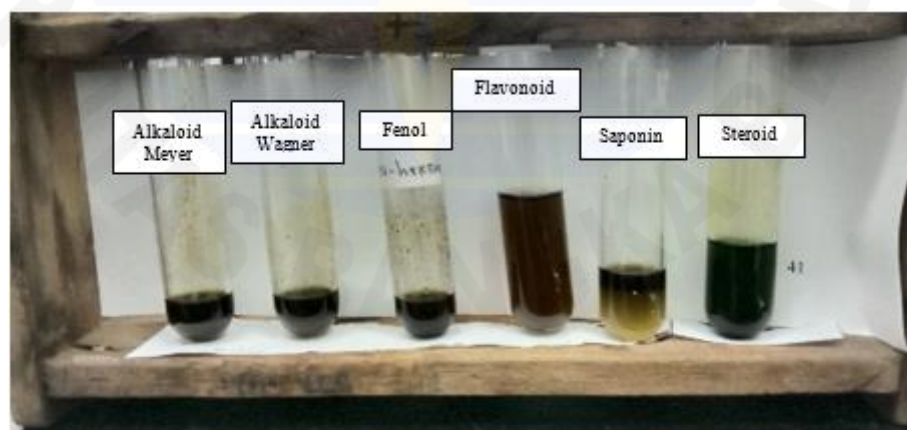


Gambar 17. Ekstrak kental fraksi etil asetat

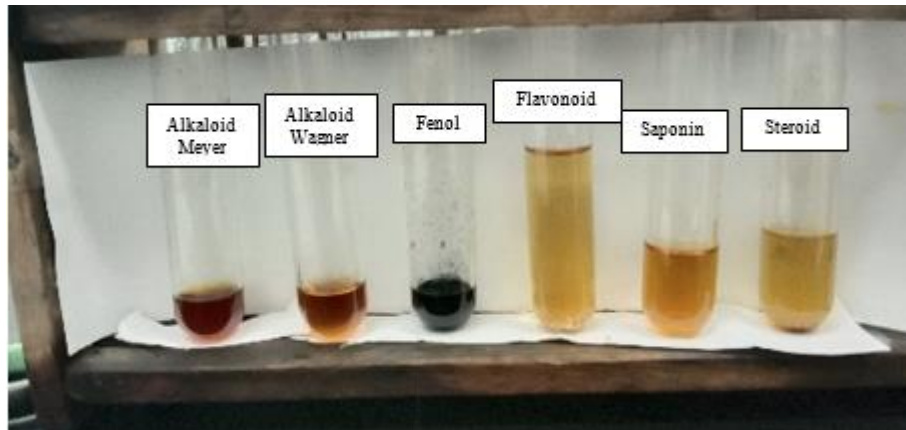
Lampiran 3. Uji Fitokimia dan FTIR



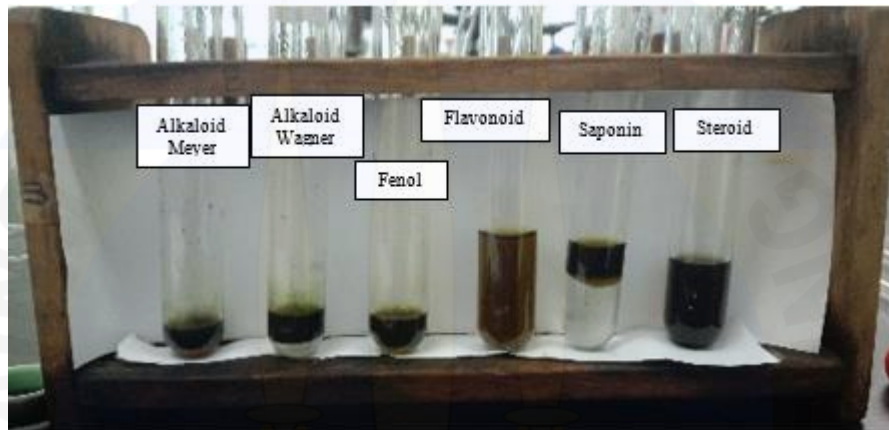
Gambar 18. Uji fitokimia ekstrak kental daun pelawan



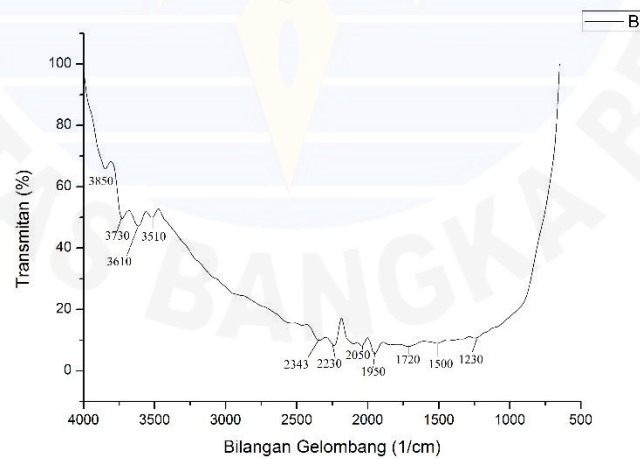
Gambar 19. Uji fitokimia fraksi etil asetat



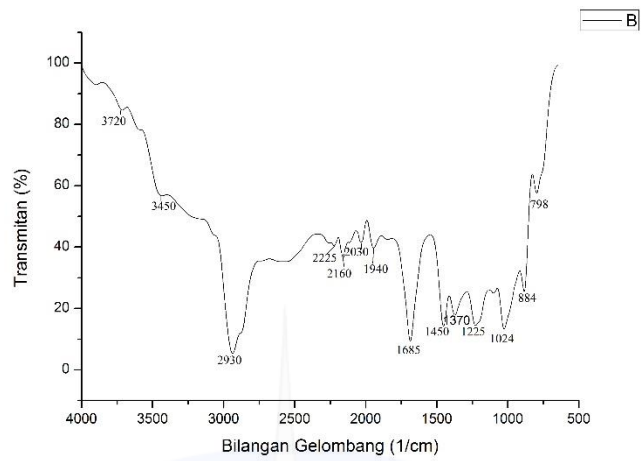
Gambar 20. Uji fitokimia fraksi MeOH : air



Gambar 21. Uji fitokimia fraksi n-heksana



Gambar 22. Hasil FTIR fraksi MeOH: air

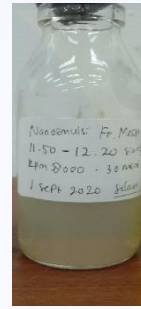


Gambar 23. Hasil FTIR fraksi *n*-heksana

Lampiran 4. Pembuatan Nanoemulsi



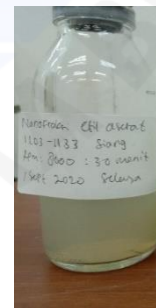
Gambar 24. Pembuatan nanoemulsi



Gambar 25. Nanoemulsi fraksi MeOH: air

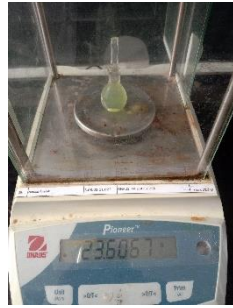


Gambar 26. Nanoemulsi fraksi *n*-heksana



Gambar 27. Nanoemulsi fraksi etil asetat

Lampiran 4. Uji evaluasi nanoemulsi



Gambar 28. Uji massa jenis n-heksana



Gambar 29. Uji massa jenis MeO:air



Gambar 30. Uji massa jenis etil asetat



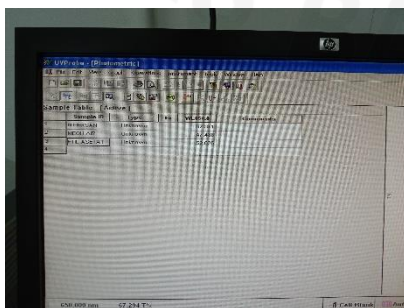
Gambar 31. Uji pH



Gambar 32. Proses sentrifugasi

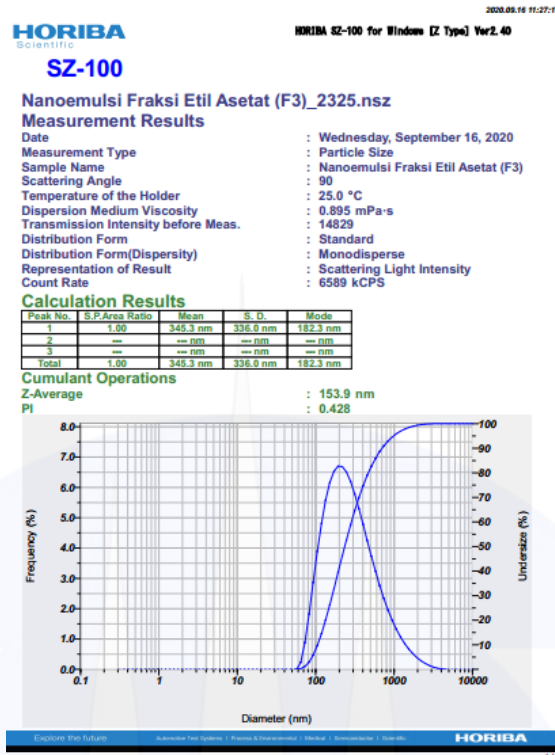


Gambar 33. Uji viskositas

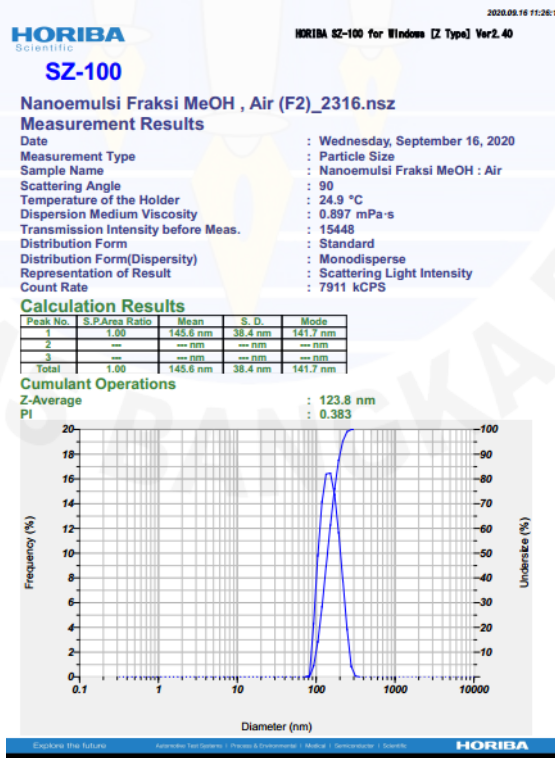


Gambar 34. Uji persen transmittan

Lampiran 5. Uji Particle Size Analyzer



Gambar 35. Hasil PSA Nanoemulsi fraksi etil asetat



Gambar 36. Hasil PSA nanoemulsi fraksi MeOH:air

SZ-100

Nanoemulsi Fraksi N-Heksana (F1)_2306.nsz

Measurement Results

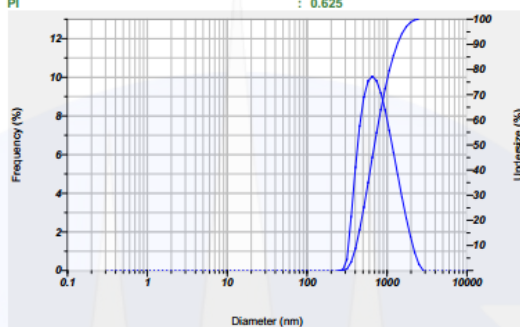
Date : Wednesday, September 16, 2020
 Measurement Type : Particle Size
 Sample Name : Nanoemulsi Fraksi N-Heksana
 Scattering Angle : 90
 Temperature of the Holder : 24.9 °C
 Dispersion Medium Viscosity : 0.897 mPa·s
 Transmission Intensity before Meas. : 17608
 Distribution Form : Standard
 Distribution Form(Dispersity) : Monodisperse
 Representation of Result : Scattering Light Intensity
 Count Rate : 3470 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	799.8 nm	382.8 nm	616.9 nm
2	---	---	---	---
3	---	---	---	---
Total	1.00	799.8 nm	382.8 nm	616.9 nm

Cumulant Operations

Z-Average : 361.0 nm
 Pi : 0.625



Gambar 37. Hasil PSA nanoemulsi fraksi n-heksana

Lampiran 6. Hasil Uji Antidiabetes

Sampel	Inhibisi (%) pada konsentrasi ($\mu\text{g}/\text{mL}$)				IC ₅₀ ($\mu\text{g}/\text{mL}$)
	1	2,5	5	10	
Quercetin	27,12	47,37	62,82	73,64	2,93
	21,85	46,49	62,82	74,96	3,13

Sampel	Inhibisi (%) pada konsentrasi (mg/mL)				IC ₅₀ (mg/mL)
	0,315	0,63	1,26	2,52	
201001-1615					
Ulangan 1	-8,86	-6,85	-1,23	1,01	NA
Ulangan 2	-7,23	-3,26	-1,17	1,14	NA
Rata-rata	-8,05±1,16	-5,05±2,54	-1,20±0,04	1,08±0,09	

Pustaka

Rizna Triana Dewi, Sanro Tachibana, Ahmad Darmawan., Effect on α -glucosidase inhibition and antioxidant activities of butyrolactone derivatives from *Aspergillus terreus* MC75, Med Chem Res (2014) 23:454–460, DOI 10.1007/s00044-013-0659-4.

Ket :

*Density sampel yakni 1,00991 g/mL.

*NA = Non Aktif

LAMPIRAN 7. PERHITUNGAN

1. MASSA JENIS

Diketahui :

Berat Piknometer = 13.7352 gr

Berat Piknometer + Aquades = 23,4532 gr

Berat Piknometer + Larutan MeOH : Air = 23,6129 gr

Berat Piknometer + Larutan N-Heksan = 23,6067 gr

Berat Piknometer + Larutan Etil Asetat = 23,6129 gr

Ditanya: Massa Jenis ?

Penyelesaian:

$$\rho = \frac{W1 - W0}{10}$$

keterangan : W0 = Berat Piknometer + Air

W1 = Berat Piknometer + Sampel

1 Massa Jenis Nanoemulsi MeOH : Air =

$$\rho = \frac{W1 - W0}{10} = \frac{23,6129 \text{ gr} - 23,4532 \text{ gr}}{10} = 0,9877$$

2 Massa Jenis Nanoemulsi n-heksana =

$$\rho = \frac{W1 - W0}{10} = \frac{23,6129 \text{ gr} - 23,6067 \text{ gr}}{10} = 0,98715$$

3 Massa Jenis Nanoemulsi Etil Asetat

$$\rho = \frac{W1 - W0}{10} = \frac{23,6129 \text{ gr} - 23,6129 \text{ gr}}{10} = 0,98789$$

2. VISKOSITAS

Viskositas dilakukan perhitungan menggunakan rumus :

$$\eta = \eta_0 \frac{t \cdot \rho}{t_0 \cdot \rho_0}$$

Keterangan :

η = Viskositas.

ρ = massa jenis sampel.

η_0 = Viskositas air 0,00899 P.

t_0 = waktu air.

t = waktu sampel.

ρ_0 = massa jenis air.

1. Viskositas MeOH : Air

$$t_1 = 30,77 \text{ detik}$$

$$t_3 = 30,64 \text{ detik}$$

$$t_2 = 30,04 \text{ detik}$$

$$t_{\text{rata-rata}} = 30,48 \text{ detik}$$

$$\text{Penyelesaian : } \eta = 0,00899 \cdot \frac{30,48 \cdot 0,9877}{4,84 \cdot 0,9718} = 0,0575 \text{ Pa.s}$$

2. Viskositas Nanoemulsi n-heksana

$$t_1 = 4,74 \text{ detik}$$

$$t_3 = 4,74 \text{ detik}$$

$$t_2 = 5,05 \text{ detik}$$

$$t_{\text{rata-rata}} = 4,84 \text{ detik}$$

$$\text{Penyelesaian : } \eta = 0,00899 \cdot \frac{31,29 \cdot 0,98715}{4,84 \cdot 0,9718} = 0,0590 \text{ Pa.s}$$

3. Viskositas Nanoemulsi Etil Asetat

$$t_1 = 4,74 \text{ detik}$$

$$t_3 = 4,74 \text{ detik}$$

$$t_2 = 5,05 \text{ detik}$$

$$t_{\text{rata-rata}} = 4,84 \text{ detik}$$

$$\text{Penyelesaian : } \eta = 0,00899 \cdot \frac{31,7 \cdot 0,98789}{4,84 \cdot 0,9718} = 0,0598 \text{ Pa.s}$$