

LAMPIRAN

1. Hasil determinasi

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
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LEMBAR IDENTIFIKASI TUMBUHAN
No.54/IB/12/2019

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Departemen Biologi FMIPA UNPAD, dengan ini menerangkan bahwa :

Nama : Faizal Alip Maulana
NPM : 11161025
Instansi : Universitas Bhakti Kencana
Telah melakukan identifikasi tumbuhan, dengan No. Koleksi : -
Tanggal Koleksi : 12 Desember 2019
Lokasi : Majalaya

Hasil Identifikasi.

Nama Ilmiah : *Aquilaria malaccensis* Lam.
Sinonim : *Aquilaria secundaria* Rumph. ex DC.
Nama Lokal : Daun gaharu
Famili : Thymelaeaceae

Klasifikasi (Hierarki Taksonomi)

Kingdom	Plantae
Divisi	Magnoliophyta
Class	Magnoliopsida
Ordo	Malvales
Famili	Thymelaeaceae
Genus	<i>Aquilaria</i>
Species	<i>Aquilaria malaccensis</i> Lam

Referensi:

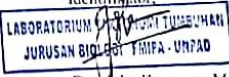
Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. *Flora of Java*. Wolter-Noordhoff NV. Groningen.

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York

The Plant List. *Website Dunia Tumbuhan*. <http://www.theplantlist.org/tpl1.1/record/kew-713>
Diakses tanggal. 17 Desember 2019.

Jatinangor, 17 Desember 2019

Identifikasi,


Drs. Joko Kusmoro, M.P.
NIP. 19600801 199101 1 001

2. Perhitungan Rendemen ekstrak

A. Rendemen ekstrak Maserasi

Bobot simplisia yang digunakan = 2 Kg = 2000 gram

Jumlah bobot ekstrak kental yang didapat = 188,901 gram

Bobot rendemen ekstrak

$$\frac{\text{ekstrak kental}}{\text{bobot simplisia}} \times 100\%$$

$$\frac{188,901}{2000} \times 100\% = 9,445 \%$$

B. Rendemen ekstrak Sokhlet

$$\text{Bobot ekstrak} = 15,483 \text{ g}$$

$$\text{Bobot simplisia} = 100 \text{ g}$$

$$\frac{\text{ekstrak kental}}{\text{bobot simplisia}} \times 100\%$$

$$\frac{15,483 \text{ g}}{100 \text{ g}} \times 100\% = 15,48 \%$$

3. perhitungan Bobot jenis ekstrak

A. bobot jenis ekstrak metode Sokhlet

$$W_0 (\text{Piknometer kosong}) = 21,9976 \text{ g}$$

$$W_1 (\text{Piknometer} + \text{air}) = 31,526 \text{ g}$$

$$W_2 (\text{Piknometer} + \text{ekstrak}) = 29,593 \text{ g}$$

$$\begin{aligned} \text{Bobot jenis} &= \frac{W_2 - W_0}{W_1 - W_0} \\ &= \frac{29,593 \text{ g} - 21,9976 \text{ g}}{31,526 \text{ g} - 21,9976 \text{ g}} = \frac{7,5954}{9,5284} = 0,7971 \text{ g/ml} \end{aligned}$$

B. Bobot jenis ekstrak metode maserasi

$$W_0 (\text{Piknometer kosong}) = 22,769 \text{ g}$$

$$W_1 (\text{Piknometer} + \text{air}) = 32,553 \text{ g}$$

$$W_2 (\text{Piknometer} + \text{ekstrak}) = 30,667 \text{ g}$$

$$\begin{aligned} \text{Bobot jenis} &= \frac{W_2 - W_0}{W_1 - W_0} \\ &= \frac{30,667 \text{ g} - 22,769 \text{ g}}{32,553 \text{ g} - 22,769 \text{ g}} = \frac{7,898}{9,784} = 0,8072 \text{ g/ml} \end{aligned}$$

4. Perhitungan kadar abu

a. Kadar abu total

$$\text{Bobot krus kosong} = 40,3642 \text{ g}$$

$$\text{Bobot simplisia} = 2,0046 \text{ g}$$

$$\text{Bobot krus} + \text{abu} = 40,3911 \text{ g}$$

$$\text{Bobot abu} = 40,3911 - 40,3642$$

$$= 0,0269 \text{ g}$$

$$\begin{aligned}\text{Persen kadar abu} &= \frac{\text{bobot abu sisa pijar}}{\text{bobot sampel}} \times 100 \% \\ &= \frac{0,0269 \text{ g}}{2,0046 \text{ g}} \times 100 \% \\ &= 1,345 \%\end{aligned}$$

b. Kadar abu tidak larut asam

$$\begin{aligned}\text{Bobot krus kosong} &= 40,3642 \text{ g} \\ \text{Bobot simplisia} &= 2,0046 \text{ g} \\ \text{Bobot krus + abu} &= 40,3686 \text{ g} \\ \text{Bobot abu} &= 40,3686 - 40,3642 = 0,0044 \text{ g}\end{aligned}$$

Persen kadar abu tak larut asam

$$\begin{aligned}&= \frac{\text{bobot abu tidak larut asam}}{\text{bobot sampel}} \times 100\% \\ &= \frac{0,0044 \text{ g}}{2,0046} \times 100 \% = 0,22 \%\end{aligned}$$

5. Perhitungan kadar Sari

a. Kadar sari larut air

$$\begin{aligned}\text{Bobot cawan kosong} &= 58,82 \text{ g} \\ \text{Bobot cawan + sari} &= 58,91 \text{ g} \\ \text{Persen kadar sari} &= \frac{(\text{cawan+sari})-(\text{cawan kosong})}{\text{bobot simplisia}} \times 5 \times 100 \% \\ &= \frac{58,91 \text{ g}-58,82 \text{ g}}{5 \text{ gram}} \times 5 \times 100 \% = 9 \%\end{aligned}$$

b. Kadar Sari Larut Etanol

$$\begin{aligned}\text{Bobot cawan kosong} &= 57,24 \text{ g} \\ \text{Bobot cawan + sari} &= 57,36 \text{ g} \\ \text{Persen kadar sari} &= \frac{(\text{cawan+sari})-(\text{cawan kosong})}{\text{bobot simplisia}} \times 5 \times 100 \% \\ &= \frac{57,36 \text{ g}-57,24 \text{ g}}{5 \text{ gram}} \times 5 \times 100 \% = 12 \%\end{aligned}$$

6. Perhitungan Stabilitas Membran

$$\text{Rumus : } 100 - \left(\frac{a_1 - a_2}{a_3} \right) \times 100\%$$

Keterangan a_1 = abs uji

a_2 = abs kontrol uji

a_3 = abs kontrol negatif

$$\begin{aligned} \text{A. maserasi } 50 \mu/\text{ml} &= 100 - \left(\frac{0,1 - 0,034667}{0,066333} \right) \times 100\% \\ &= 1,5075377 \% \end{aligned}$$

$$\begin{aligned} \text{B. maserasi } 100 \mu/\text{ml} &= 100 - \left(\frac{0,085 - 0,034}{0,066333} \right) \times 100\% \\ &= 23,115578 \% \end{aligned}$$

$$\begin{aligned} \text{C. maserasi } 200 \mu/\text{ml} &= 100 - \left(\frac{0,072667 - 0,036333}{0,066333} \right) \times 100\% \\ &= 45,226131 \% \end{aligned}$$

$$\begin{aligned} \text{D. maserasi } 400 \mu/\text{ml} &= 100 - \left(\frac{0,073667 - 0,039333}{0,066333} \right) \times 100\% \\ &= 48,241206 \% \end{aligned}$$

$$\begin{aligned} \text{E. maserasi } 800 \mu/\text{ml} &= 100 - \left(\frac{0,075667 - 0,042667}{0,066333} \right) \times 100\% \\ &= 50,251256\% \end{aligned}$$

$$\begin{aligned} \text{F. Soxhlet } 50 \mu/\text{ml} &= 100 - \left(\frac{0,099 - 0,035}{0,066333} \right) \times 100\% \\ &= 3,517588\% \end{aligned}$$

$$\begin{aligned} \text{G. Soxhlet } 100 \mu/\text{ml} &= 100 - \left(\frac{0,084 - 0,035333}{0,066333} \right) \times 100\% \\ &= 26,63317 \% \end{aligned}$$

$$\begin{aligned} \text{H. Soxhlet } 200 \mu/\text{ml} &= 100 - \left(\frac{0,072667 - 0,037667}{0,066333} \right) \times 100\% \\ &= 47,23618 \% \end{aligned}$$

$$\begin{aligned} \text{I. Soxhlet } 400 \mu/\text{ml} &= 100 - \left(\frac{0,065333 - 0,040667}{0,066333} \right) \times 100\% \\ &= 62,81407 \% \end{aligned}$$

$$\begin{aligned} \text{J. Soxhlet } 800 \mu/\text{ml} &= 100 - \left(\frac{0,057667 - 0,043}{0,066333} \right) \times 100\% \\ &= 77,88945 \% \end{aligned}$$

$$\text{K. standar } 50 \mu/\text{ml} = 100 - \left(\frac{0,091667 - 0,032667}{0,066333} \right) \times 100\%$$

$$= 11,0552764 \%$$

$$\text{L. standari } 100 \mu/\text{ml} = 100 - \left(\frac{0,080667 - 0,035}{0,066333} \right) \times 100\%$$

$$= 31,1557789 \%$$

$$\text{M. standar } 200 \mu/\text{ml} = 100 - \left(\frac{0,067667 - 0,036333}{0,066333} \right) \times 100\%$$

$$= 52,7638191 \%$$

$$\text{N. standar } 400 \mu/\text{ml} = 100 - \left(\frac{0,063 - 0,04}{0,066333} \right) \times 100\%$$

$$= 65,3266332 \%$$

$$\text{O. standar } 800 \mu/\text{ml} = 100 - \left(\frac{0,055 - 0,043}{0,066333} \right) \times 100\%$$

$$= 81,9095477 \%$$

7. tabel rata-rata absorbansi spektro uv-fis

SAMPEL	50ppm	100ppm	200ppm	400ppm	800ppm
MASERASI	0,1	0,085	0,07266667	0,07366667	0,07566667
SOKHLET	0,099	0,084	0,07266667	0,06533333	0,05766667
STANDAR	0,09166667	0,08066667	0,06766667	0,063	0,055
k. uji maserasi	0,03466667	0,034	0,03633333	0,03933333	0,04266667
k. uji sokhlet	0,035	0,03533333	0,03766667	0,04066667	0,043
kontrol negatif	0,06633333				
kontrol standar	0,03266667	0,035	0,03633333	0,04	0,043