# LAMPIRAN

## Lampiran 1. Hasil Determinasi Pegagan

**DIREKTORAT PENGELOLAAN KOLEKSI ILMIAH**
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Laman: www.brin.go.id

Nomor : B-1406/IV/DI.05.07/5/2022 20 Mei 2022
Lampiran : -
Perihal : Hasil Identifikasi/Determinasi Tumbuhan

Yth.
Bpk./Ibu/Sdr(i). **Afra Shafa Ghalda**
NIM : 20180311103
Universitas Esa Unggul

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Direktorat Pengelolaan Koleksi Ilmiah BRIN Cibinong, adalah sebagai berikut :

| No. | No. Kol. | Jenis | Suku |
|---|---|---|---|
| 1. | Tanaman Pegagan | *Centella asiatica* (L.) Urb. | Apiaceae |

Demikian, semoga berguna bagi Saudara.

Plt. Direktorat Pengelolaan Koleksi Ilmiah
Badan Riset dan Inovasi Nasional

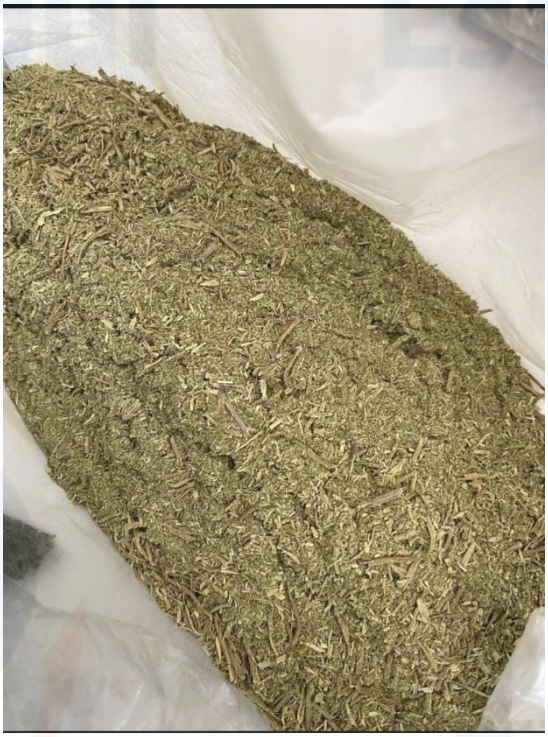
TT ELEKTRONIK

Dr. Ir. Hendro Wicaksono, M.Sc., Eng

Dokumen ini ditandatangani secara elektronik menggunakan sertifikat dari BSrE, silahkan lakukan verifikasi pada dokumen elektronik yang dapat diunduh dengan melakukan scan QR Code

**Lampiran 2. Pembuatan Ekstrak Etanol 96% dan N-Heksana Daun Pegagan**

Simplisia daun pegagan yang sudah kering digrinder



Diperoleh serbuk kasar


Proses maserasi ekstrak etanol 96% dan n-heksana daun pegagan


Pemisahan filtrat dan residu


Filtrat yang didapat disimpan dalam wadah yang teretutup

Proses penggantian pelarut


Filtrat dipekatkan menggunakan *rotary evaporator*


Filtrat diuapkan kembali menggunakan waterbath


Ekstrak kental etanol 96% dan n-heksana daun pegagan

**Lampiran 3. Skrining Fitokimia**

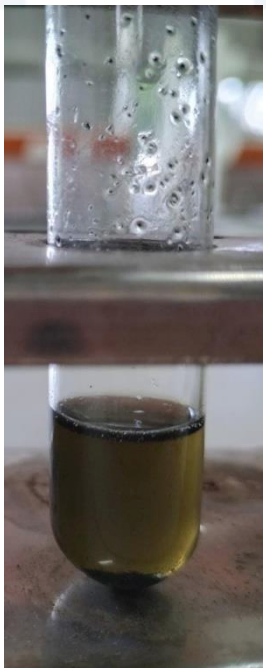
1. Skrining Fitokimia Ekstrak Etanol 96%


Alkaloid (-)

Reagen mayer


Alkaloid (-)

Reagen dragendorff



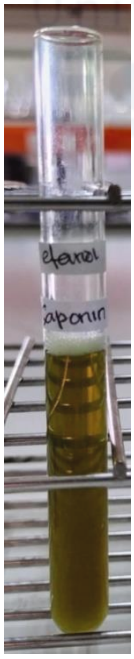
Flavonoid (+)


Alkaloid (-)

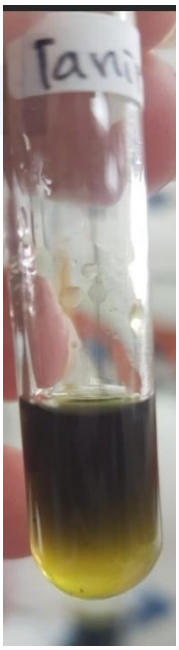
Reagen Bouchard

Steroid (+)

Triterpenoid (+)

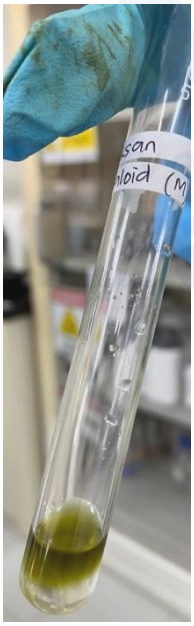


Saponin (+)



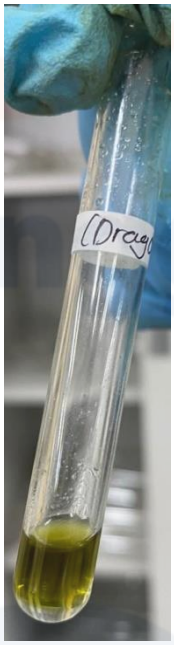
Tanin (+)

2. Skrining Fitokimia Ekstrak N-Heksana



Alkaloid (-)

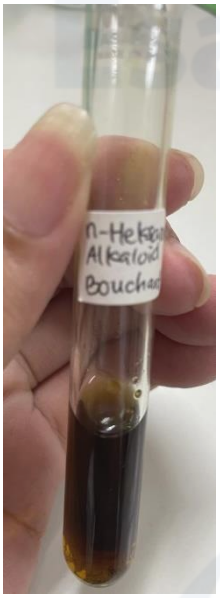
Reagen mayer



Alkaloid (-)

Reagen dragendorff

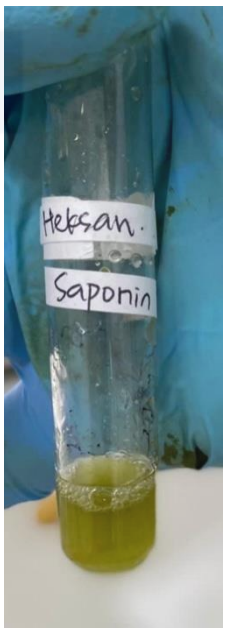
Flavonoid (+)




Alkaloid (-)

Reagen Bouchard

Steroid (+)




Saponin (+)


Tanin (+)

Triterpenoid (+)

**Lampiran 4. Hasil perhitungan Rendemen Esktrak**

a. Rendemen Ekstrak Etanol 96% Daun Pegagan

Rendemen % = $\frac{\text{bobot ekstrak}}{\text{berat simplisia}}$ x 100%

= $\frac{208{,}62\ \text{g}}{1.250\ \text{g}}$ x 100%

= 16,689%

= 16,69%

b. Rendemen Ekstrak N-Heksana Daun Pegagan

Rendemen % = $\frac{\text{bobot ekstrak}}{\text{berat simplisia}}$x 100%

= $\frac{58{,}55\ \text{g}}{1250\ \text{g}}$ x 100%

= 4,684%

**Lampiran 5. Perhitungan Larutan Sampel Uji**

1. Ekstrak Etanol 96% Daun Pegagan

a. 1000 ppm

10 mg/10 mL

b. 800 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 800

$V_1 = \frac{5\ x\ 800}{1000}$

= 4 mL

c. 400 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 400

$V_1 = \frac{5\ x\ 400}{1000}$

= 2 mL

d. 200 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 200

$V_1 = \frac{5\ x\ 200}{1000}$

= 1 mL

e. 100 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 100

$V_1 = \frac{5\ x\ 100}{1000}$

= 0,5 mL

f. 50 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 50

$V_1 = \frac{5\ x\ 50}{1000}$

= 0,25 mL

2. Ekstrak N-Heksana Daun Pegagan

a. 1000 ppm

10 mg/10 mL

b. 800 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 800

$V_1 = \frac{5\ x\ 800}{1000}$

= 4 mL

c. 400 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 400

$V_1 = \frac{5\ x\ 400}{1000}$

= 2 mL

d. 200 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 200

$V_1 = \frac{5\ x\ 200}{1000}$

= 1 mL

e. 100 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 100

$V_1 = \frac{5\ x\ 100}{1000}$

= 0,5 mL

f. 50 ppm

$M_1V_1 = M_2V_2$

1000 x $V_1$ = 5 x 50

$V_1 = \frac{5\ x\ 50}{1000}$

= 0,25 mL

3. Asiaticoside

a. 1000 ppm

5 mg/5 mL

b. 100 ppm

$M_1V_1 = M_2V_2$

$1000 \times V_1 = 10 \times 100$

$V_1 = \frac{10 \, x \, 100}{1000}$

$= 1$ mL

c. 50 ppm

$M_1V_1 = M_2V_2$

$100 \times V_1 = 5 \times 50$

$V_1 = \frac{5x \, 50}{100}$

$= 2{,}5$ mL

d. 20 ppm

$M_1V_1 = M_2V_2$

$100 \times V_1 = 5 \times 20$

$V_1 = \frac{5 \, x \, 20}{100}$

$= 1$ mL

e. 10 ppm

$M_1V_1 = M_2V_2$

$100 \times V_1 = 5 \times 10$

$V_1 = \frac{5 \, x \, 10}{100}$

$= 0{,}5$ mL

f. 5 ppm

$M_1V_1 = M_2V_2$

$100 \times V_1 = 5 \times 5$

$V_1 = \frac{5 \, x \, 5}{100}$

$= 0{,}25$ mL

g. 2,5 ppm

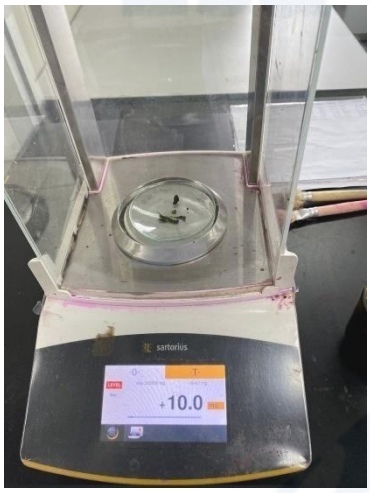
$M_1V_1 = M_2V_2$

$100 \times V_1 = 5 \times 2{,}5$

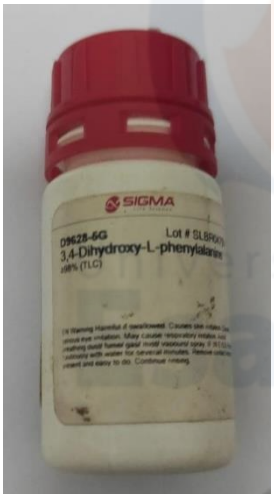
$V_1 = \frac{5 \, x \, 2{,}5}{100}$

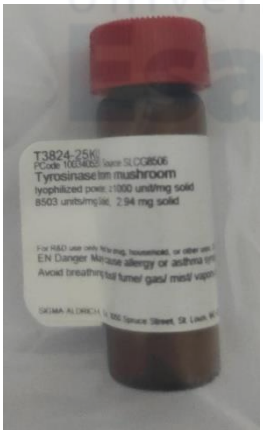
$= 0{,}125$ mL

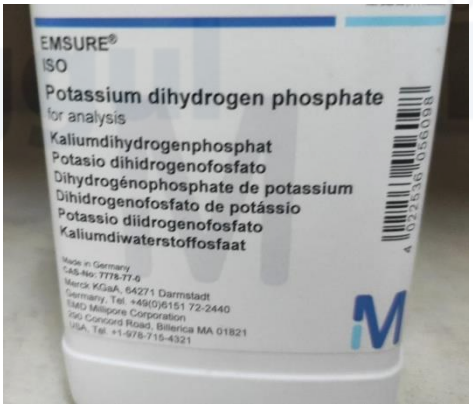
**Lampiran 6. Pembuatan Larutan Sampel Uji Aktivitas Penghambat Tirosinase**

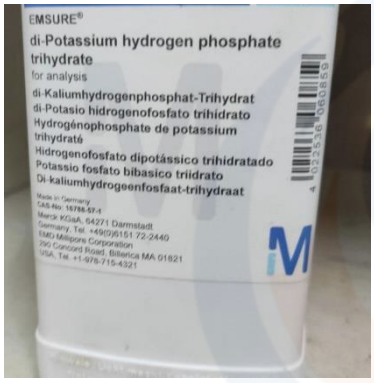








T3824-25KI
Tyrosinase from mushroom

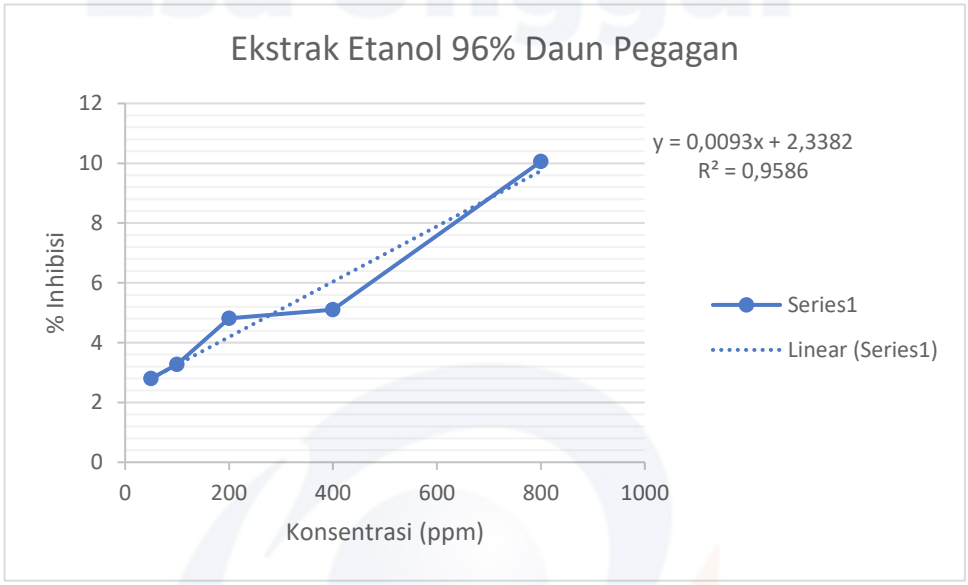

EMSURE®
ISO
Potassium dihydrogen phosphate
for analysis
Kaliumdihydrogenphosphat
Potasio dihidrogenofosfato
Dihydrogénophosphate de potassium
Dihidrogenofosfato de potássio
Potassio diidrogenofosfato
Kaliumdiwaterstoffosfaat


EMSURE®
di-Potassium hydrogen phosphate
trihydrate
for analysis
di-Kaliumhydrogenphosphat-Trihydrat
di-Potasio hidrogenofosfato trihidrato
Hydrogénophosphate de potassium
trihydraté
Hidrogenofosfato dipotássico trihidratado
Potassio fosfato bibasico triidrato
Di-kaliumhydrogeenfosfaat-trihydraat


Epoch
BioTek

**Lampiran 7. Grafik Uji Aktivitas Penghambat Tirosinase**

a. Ekstrak Etanol 96% Daun Pegagan




Perhitungan $IC_{50}$ :

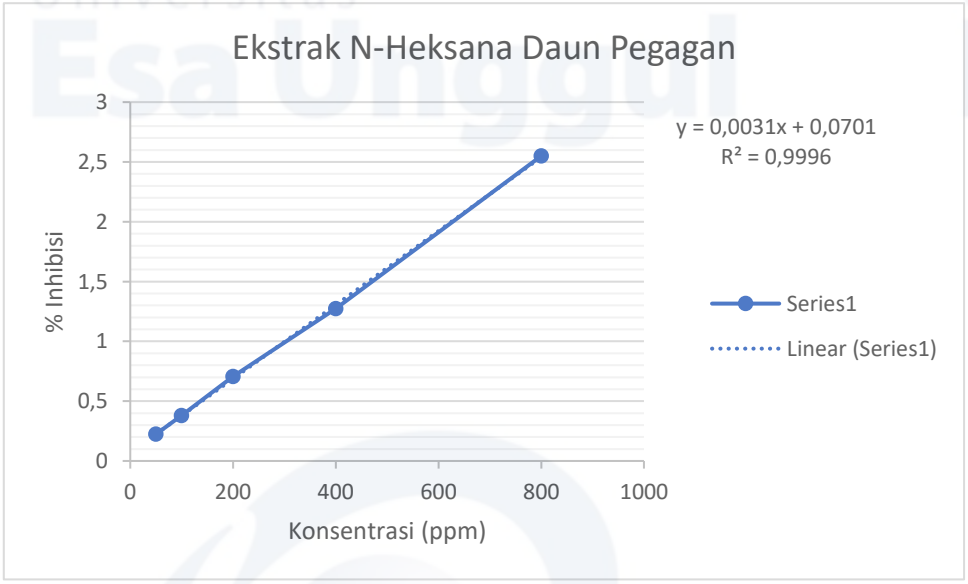
y = a + bx

50 = 2,3382 + 0,0093x

$$x = \frac{50-2,3382}{0,0093}$$

= 5149,229

b. Ekstrak N-Heksana Daun Pegagan



Perhitungan $IC_{50}$ :

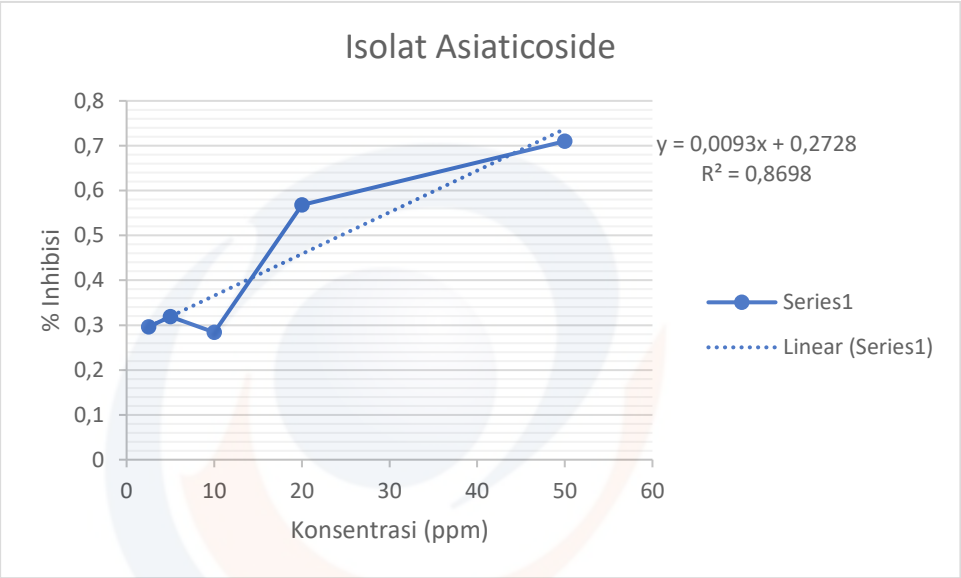
y = a + bx

50 = 0,0701 + 0,0031x

$x = \frac{50-0,0701}{0,0031}$

= 16171,773

c. Asiaticoside




Perhitungan $IC_{50}$ :

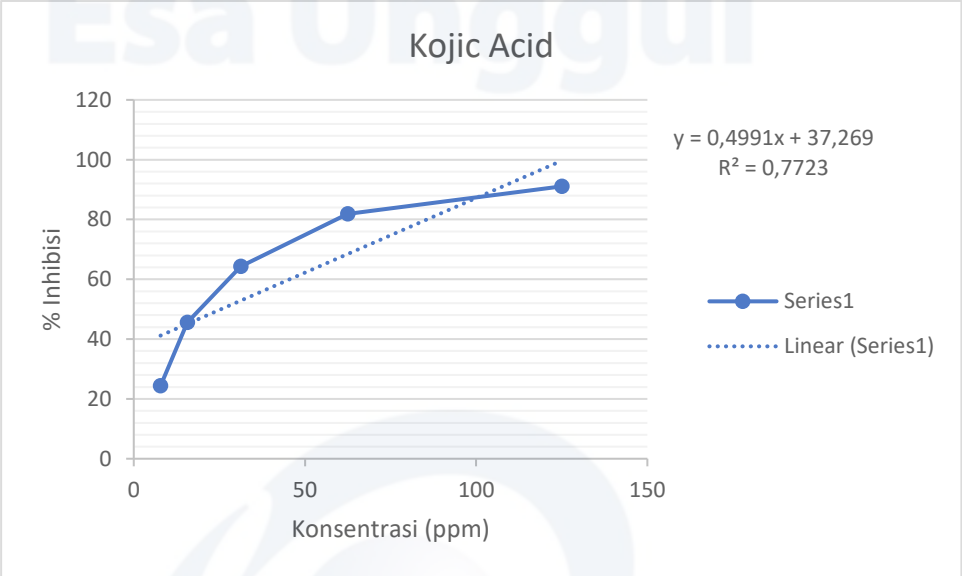
y = a + bx

50 = 0,2728 + 0,0093x

$x = \frac{50-0,2728}{0,0093}$

= 5351,806

d. Asam kojat




Perhitungan $IC_{50}$ :

y = a + bx

50 = 37,269 + 0,4991x

$$x = \frac{50 - 37{,}269}{0{,}4991}$$

= 25,507