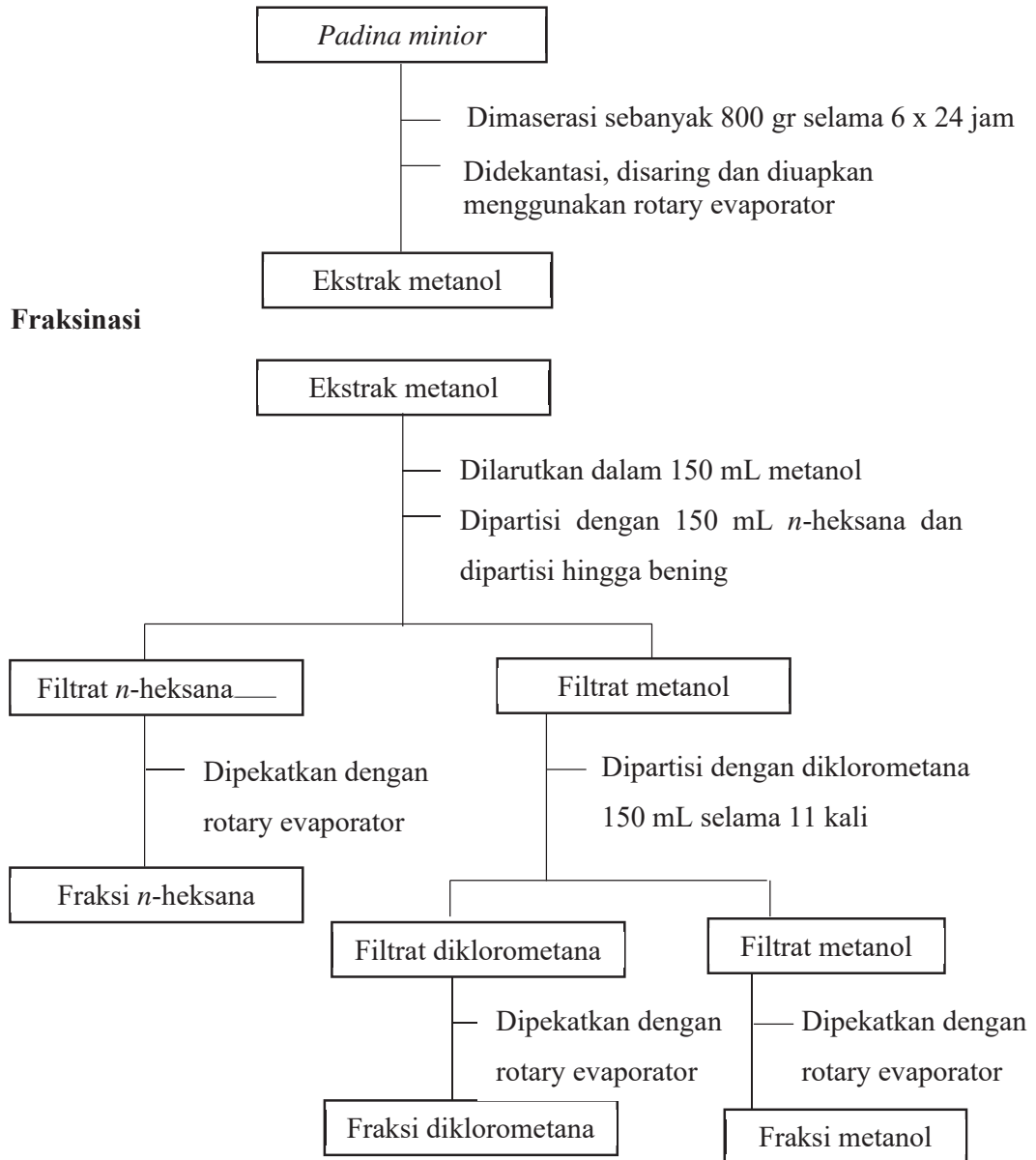


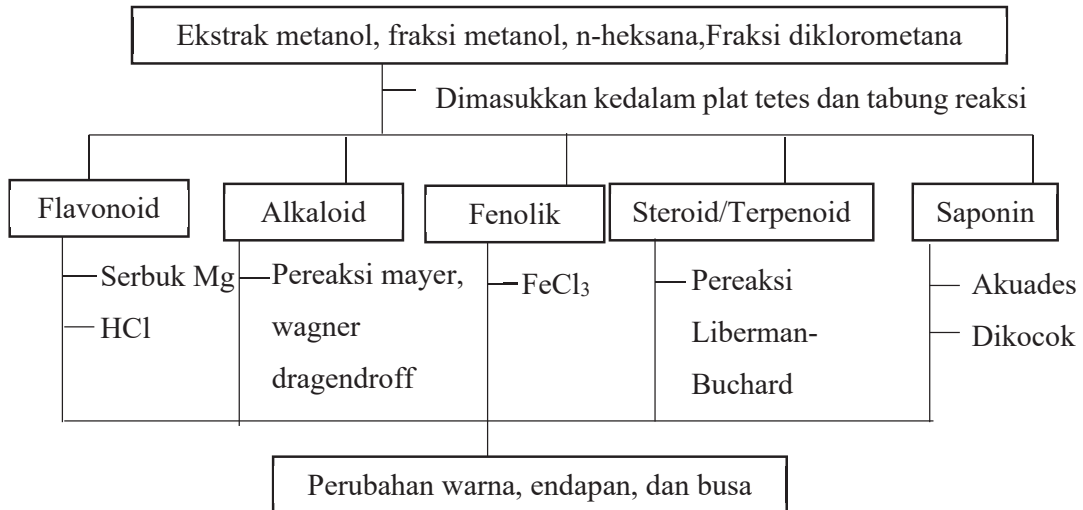
# LAMPIRAN

## Lampiran 1 Bagan Prosedur

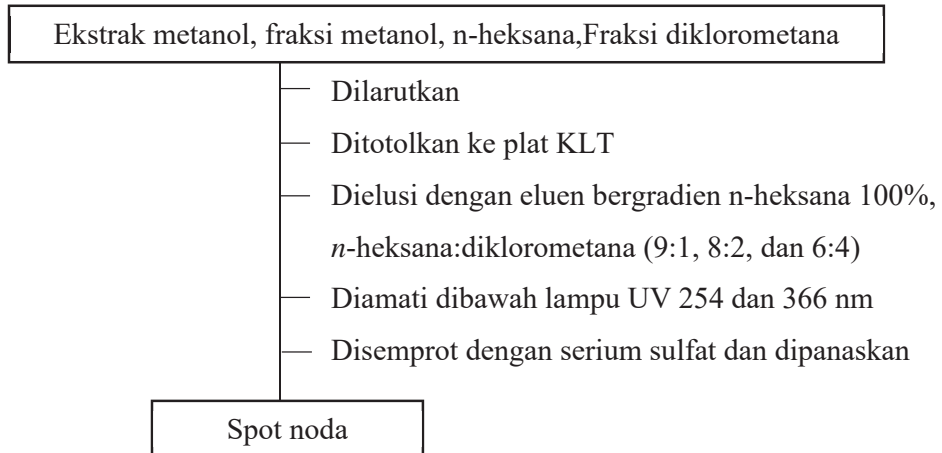
### Maserasi

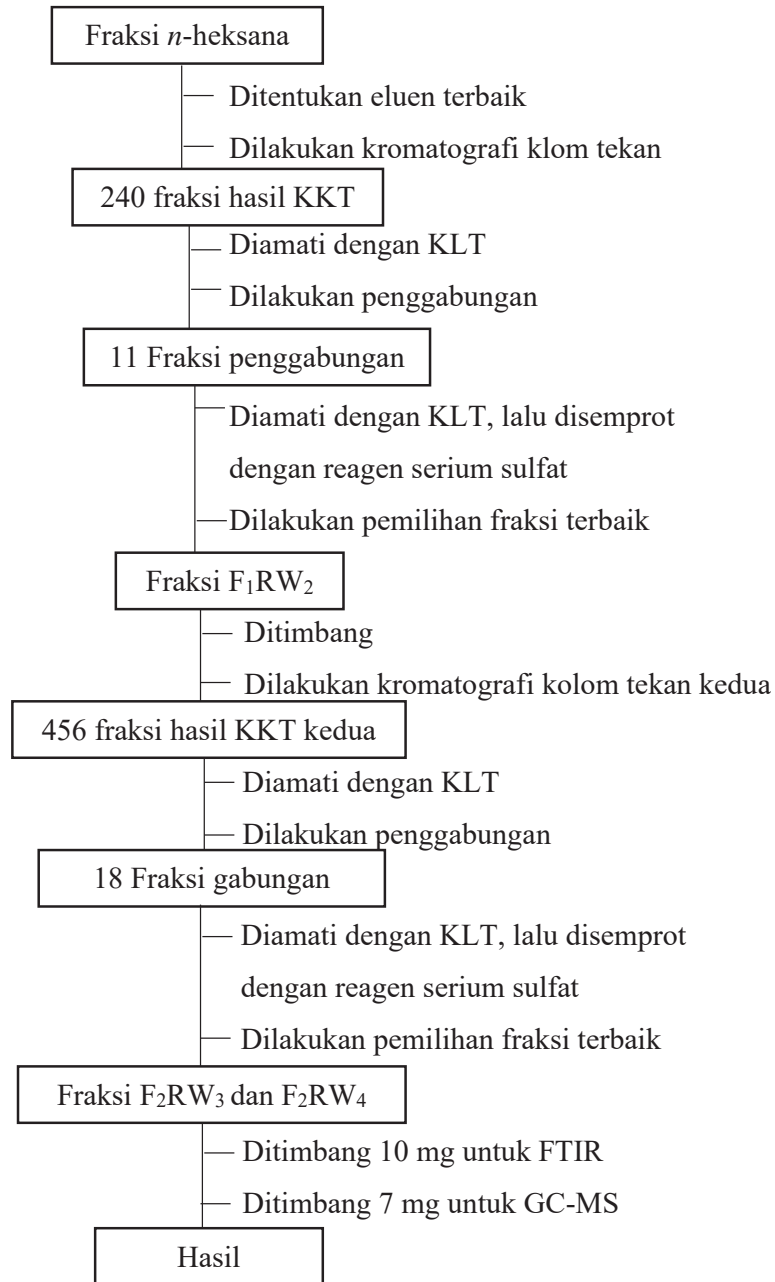


### Uji Fitokimia



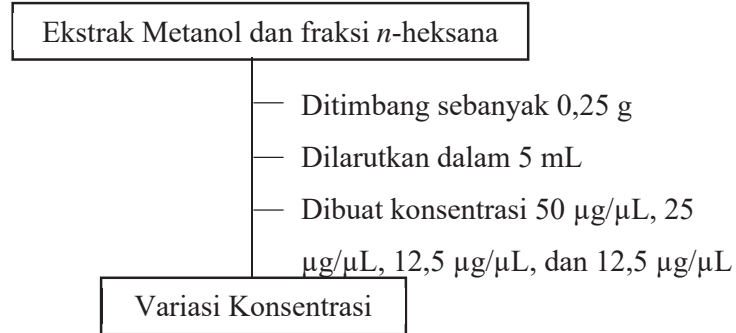
### Kromatografi Lapis Tipis



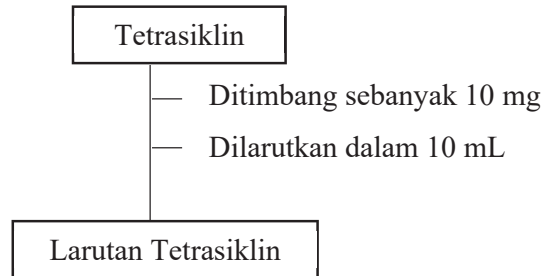
**Kromatografi Kolom Tekan (KKT)**

## Uji Aktivitas Antibakteri

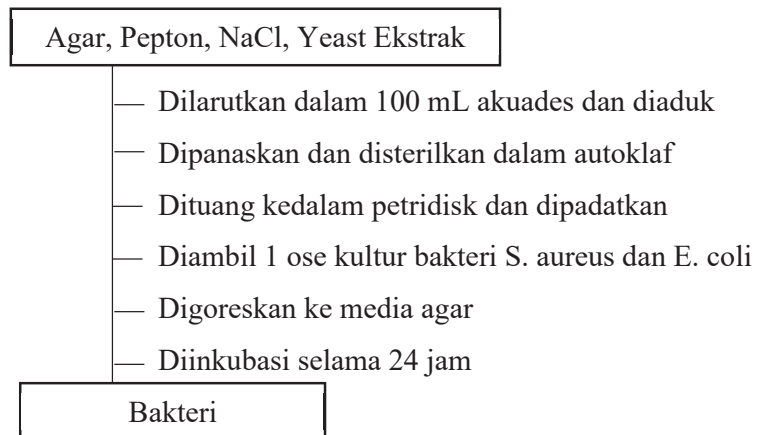
### Pembuatan Larutan Sampel



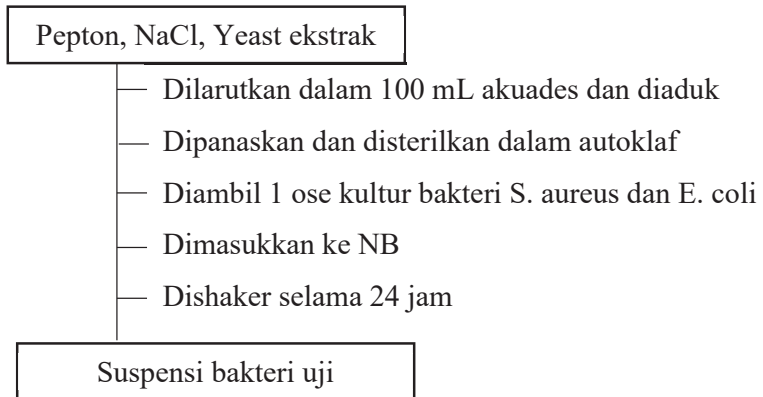
### Pembuatan Larutan Kontrol Positif



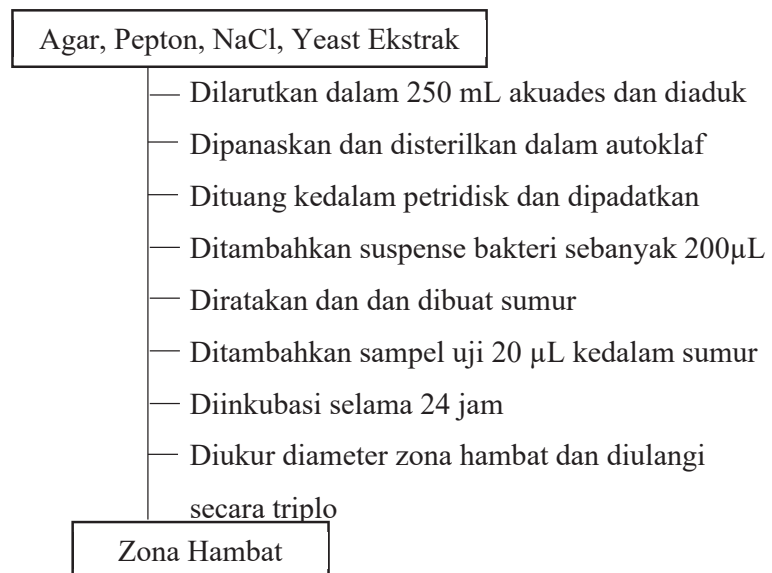
### Peremajaan Kultur Murni Bakteri



### Pembuatan Suspensi Bakteri Uji



### Pengujian Aktivitas Terhadap Pertumbuhan Bakteri



## Lampiran 2 Perhitungan

### Perhitungan Massa

#### 1. Massa ekstrak metanol

Diketahui: Massa botol kosong = 98,905 gram

Massa botol + sampel = 114,009 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 114,009 \text{ gr} - 98,905 \text{ gr} \\ &= 15,104 \text{ gram} \end{aligned}$$

#### 2. Massa fraksi *n*-heksana

Diketahui: Massa botol kosong = 14,685 gram

Massa botol + sampel = 16,894 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 16,894 \text{ gr} - 14,685 \text{ gr} \\ &= 2,209 \text{ gram} \end{aligned}$$

#### 3. Massa fraksi diklorometana

Diketahui: Massa botol kosong = 14,924 gram

Massa botol + sampel = 15,842 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 15,842 \text{ gr} - 14,924 \text{ gr} \\ &= 0,918 \text{ gram} \end{aligned}$$

#### 4. Massa fraksi metanol

Diketahui: Massa botol kosong = 7,028 gram

Massa botol + sampel = 10,100 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 10,100 \text{ gr} - 7,028 \text{ gr} \\ &= 3,072 \text{ gram} \end{aligned}$$

### Perhitungan Massa Fraksinasi

#### Massa ekstrak metanol

Diketahui: Massa botol kosong = 98,905 gram

Massa botol + sampel = 108,713 gram

$$\text{Massa sampel} = (\text{massa botol + sampel}) - (\text{massa botol kosong})$$

$$= 108,713 \text{ gr} - 98,905 \text{ gr}$$

$$= 9,808 \text{ gram}$$

### Perhitungan Rendemen

#### 1. Ekstrak metanol

Diketahui: Massa ekstrak = 15,104 gram

Massa sampel = 800 gram

$$\text{Rendemen} = \frac{\text{Massa ekstrak}}{\text{Massa sampel}} \times 100\%$$

$$= \frac{15,104 \text{ gr}}{800 \text{ gr}} \times 100\%$$

$$= 1,888 \%$$

#### 2. Fraksi *n*-heksana

Diketahui: Massa fraksi = 2,209 gram

Massa sampel = 9,808 gram

$$\text{Rendemen} = \frac{\text{Massa ekstrak}}{\text{Massa sampel}} \times 100\%$$

$$= \frac{2,209 \text{ gr}}{9,808 \text{ gr}} \times 100\%$$

$$= 22,522 \%$$

#### 3. Fraksi diklorometana

Diketahui: Massa fraksi = 0,918 gram

Massa sampel = 9,808 gram

$$\text{Rendemen} = \frac{\text{Massa ekstrak}}{\text{Massa sampel}} \times 100\%$$

$$= \frac{0,918 \text{ gr}}{9,808 \text{ gr}} \times 100\%$$

$$= 9,359 \%$$

#### 4. Fraksi metanol

Diketahui: Massa fraksi = 3,072 gram

Massa sampel = 9,808 gram

$$\text{Rendemen} = \frac{\text{Massa ekstrak}}{\text{Massa sampel}} \times 100\%$$

$$= \frac{3,072 \text{ gr}}{9,808 \text{ gr}} \times 100\%$$

$$= 31,321 \%$$

**Perhitungan Massa Fraksi *n*-heksana untuk Kolom Tekan**

Diketahui: Massa botol kosong = 14,685 gram

Massa botol + sampel = 16,186 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 16,186 \text{ gr} - 14,685 \text{ gr} \\ &= 1,501 \text{ gram} \end{aligned}$$

**Perhitungan Fraksi  $F_1R_{W_2}$** 

Diketahui: Massa botol kosong = 10,815 gram

Massa botol + sampel = 10,994 gram

$$\begin{aligned} \text{Massa sampel} &= (\text{massa botol + sampel}) - (\text{massa botol kosong}) \\ &= 10,994 \text{ gr} - 10,815 \text{ gr} \\ &= 0,179 \text{ gram} \end{aligned}$$

**Perhitungan Pembuatan Konsentrasi Larutan****Tetrasiklin 1  $\mu\text{g}/\mu\text{L}$** 

Diketahui: Konsentrasi Tetrasiklin = 1  $\mu\text{g}/\mu\text{L}$

Volume Metanol = 10 mL = 10.000  $\mu\text{L}$

$$\text{Konsentrasi} = \frac{\text{Massa}}{\text{Volume}}$$

$$\begin{aligned} 1 \mu\text{g}/\mu\text{L} &= \frac{\text{Massa} (\mu\text{g})}{10.000 \mu\text{L}} \\ &= 10.000 \mu\text{g} \\ &= 10 \text{ mg} \\ &= 0,01 \text{ g} \end{aligned}$$

**Larutan Induk 50  $\mu\text{g}/\mu\text{L}$** 

Diketahui: Konsentrasi Larutan Induk = 50  $\mu\text{g}/\mu\text{L}$

Volume Metanol = 5 mL = 5.000  $\mu\text{L}$

$$\text{Konsentrasi} = \frac{\text{Massa}}{\text{Volume}}$$

$$\begin{aligned} 50 \mu\text{g}/\mu\text{L} &= \frac{\text{Massa} (\mu\text{g})}{5000 \mu\text{L}} \\ &= 250.000 \mu\text{g} \\ &= 250 \text{ mg} \\ &= 0,25 \text{ g} \end{aligned}$$



**Larutan konsentrasi 25 µg/µL**

$$\begin{aligned}
 M_1 \times V_1 &= M_2 \times V_2 \\
 50 \mu\text{g}/\mu\text{L} \cdot X &= 25 \mu\text{g}/\mu\text{L} \cdot 5 \text{ mL} \\
 50 X &= 125 \text{ mL} \\
 X &= 2,5 \text{ mL}
 \end{aligned}$$

**Larutan konsentrasi 12,5 µg/µL**

$$\begin{aligned}
 M_1 \times V_1 &= M_2 \times V_2 \\
 25 \mu\text{g}/\mu\text{L} \cdot X &= 12,5 \mu\text{g}/\mu\text{L} \cdot 5 \text{ mL} \\
 25 X &= 62,5 \text{ mL} \\
 X &= 2,5 \text{ mL}
 \end{aligned}$$

**Larutan konsentrasi 6,25 µg/µL**

$$\begin{aligned}
 M_1 \times V_1 &= M_2 \times V_2 \\
 12,5 \mu\text{g}/\mu\text{L} \cdot X &= 6,25 \mu\text{g}/\mu\text{L} \cdot 5 \text{ mL} \\
 12,5 X &= 31,25 \text{ mL} \\
 X &= 2,5 \text{ mL}
 \end{aligned}$$

**Diameter Zona Hambat Kontrol Positif**

No	S.aureus dalam Metanol	E. coli dalam Metanol	S. aureus dalam <i>n</i> -heksana	E. coli dalam <i>n</i> -heksana
1.	26,1	24,0	23,1	21,1
2.	25,6	25,5	23,8	21,4
3.	23,8	24,5	23,0	21,5
4.	26,0	24,6	22,5	21,8
5.	26,3	26,1	23,0	21,3
6.	26,8	23,9	24,3	21,9
7.	27,0	26,0	24,2	21,6
8.	27,2	24,8	23,4	21,2
9.	24,3	25,8	23,8	21,7
10.	25,5	24,8	23,3	21,5
Rata-rata	25,86	25	23,44	21,5
STD	1,111755	0,802773	0,575809	0,258199

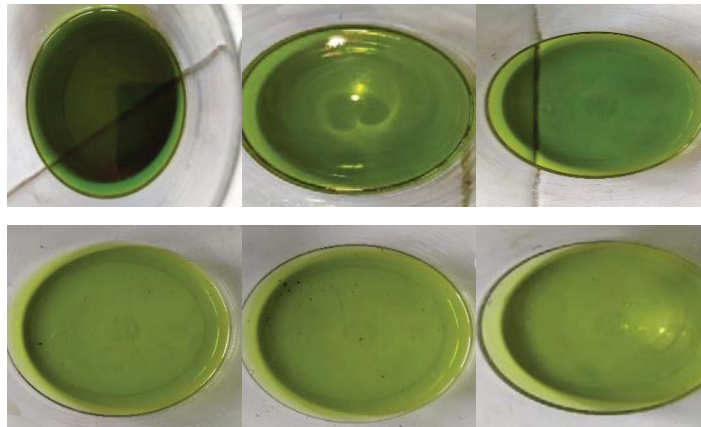
### Lampiran 3 Dokumentasi

#### Preparasi Sampel



Preparasi sampel

#### Ekstraksi Senyawa Aktif



Maserasi 6 x 24 jam

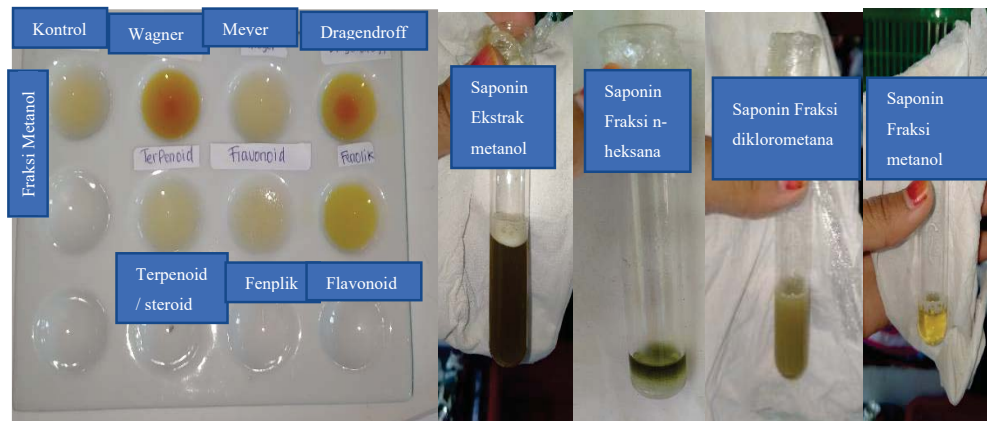
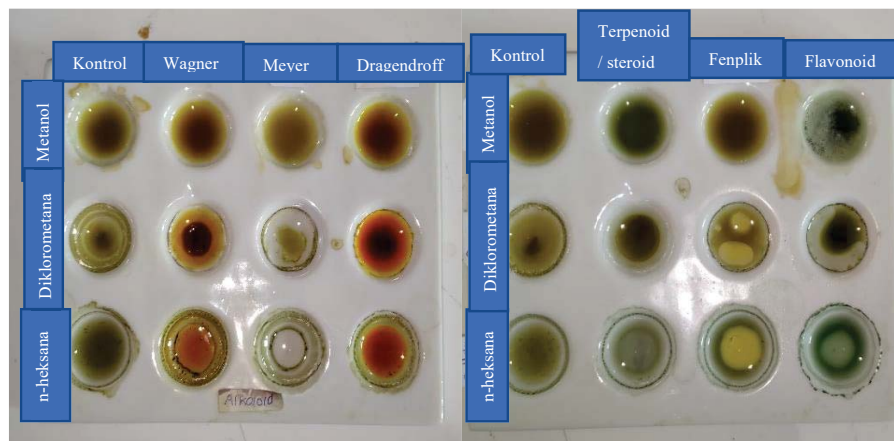


Partisi *n*-heksana



Partisi diklorometana

## Uji Fitokimia



### Kromatografi Kolom Tekan

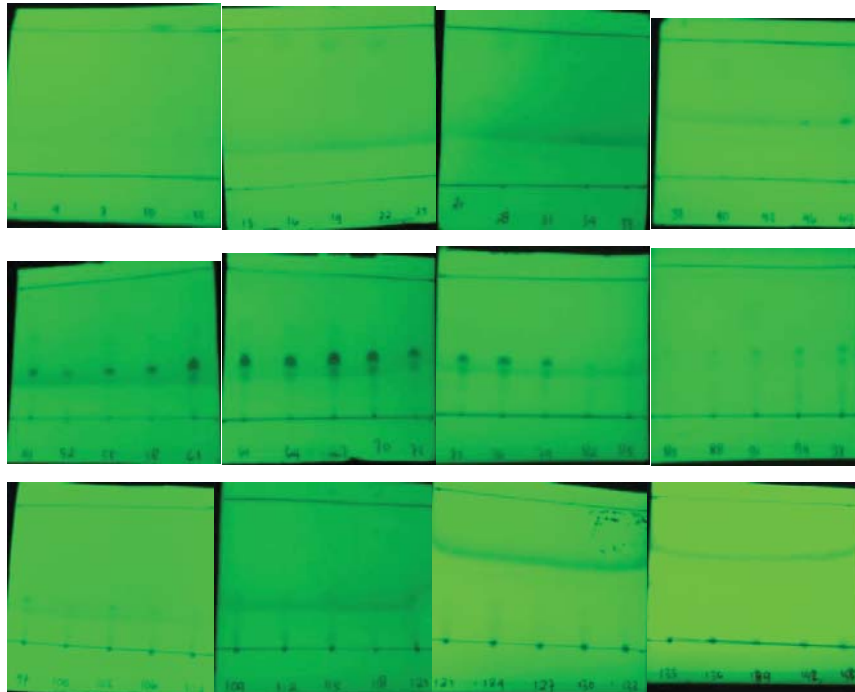


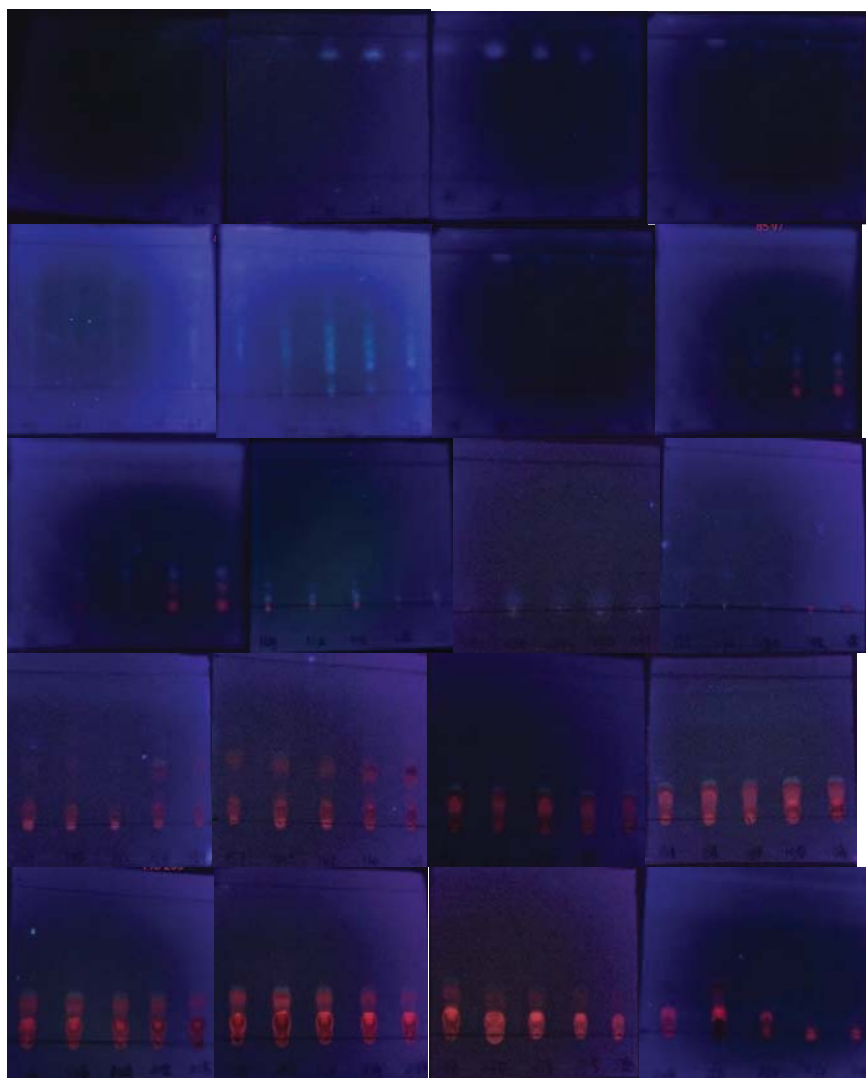
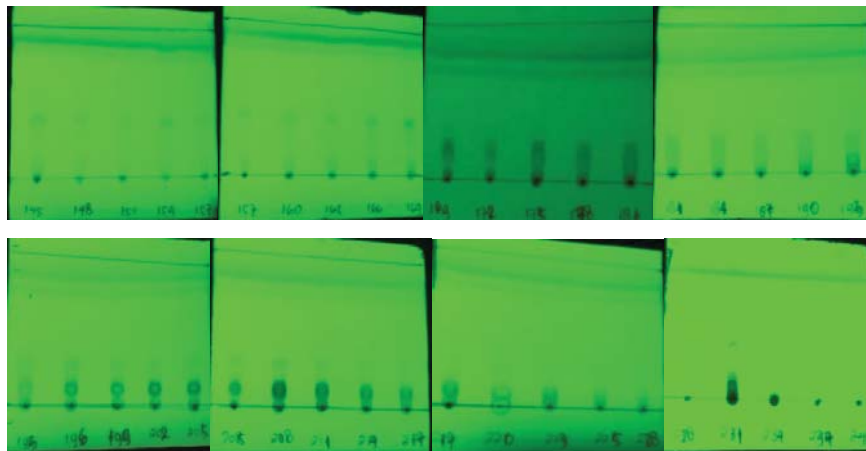
Kromatografi kolom tekan pertama



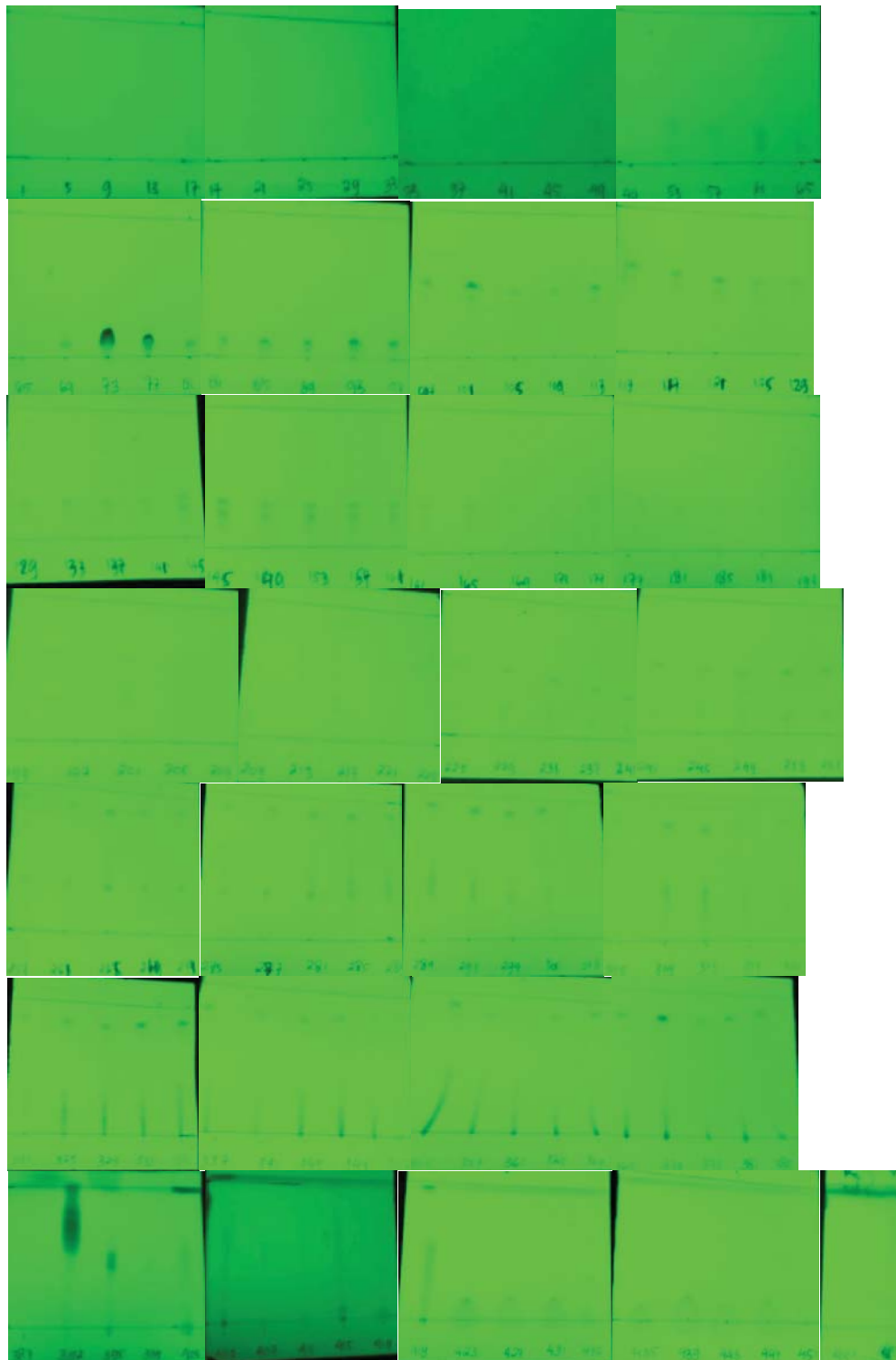
Kromatografi kolom tekan kedua

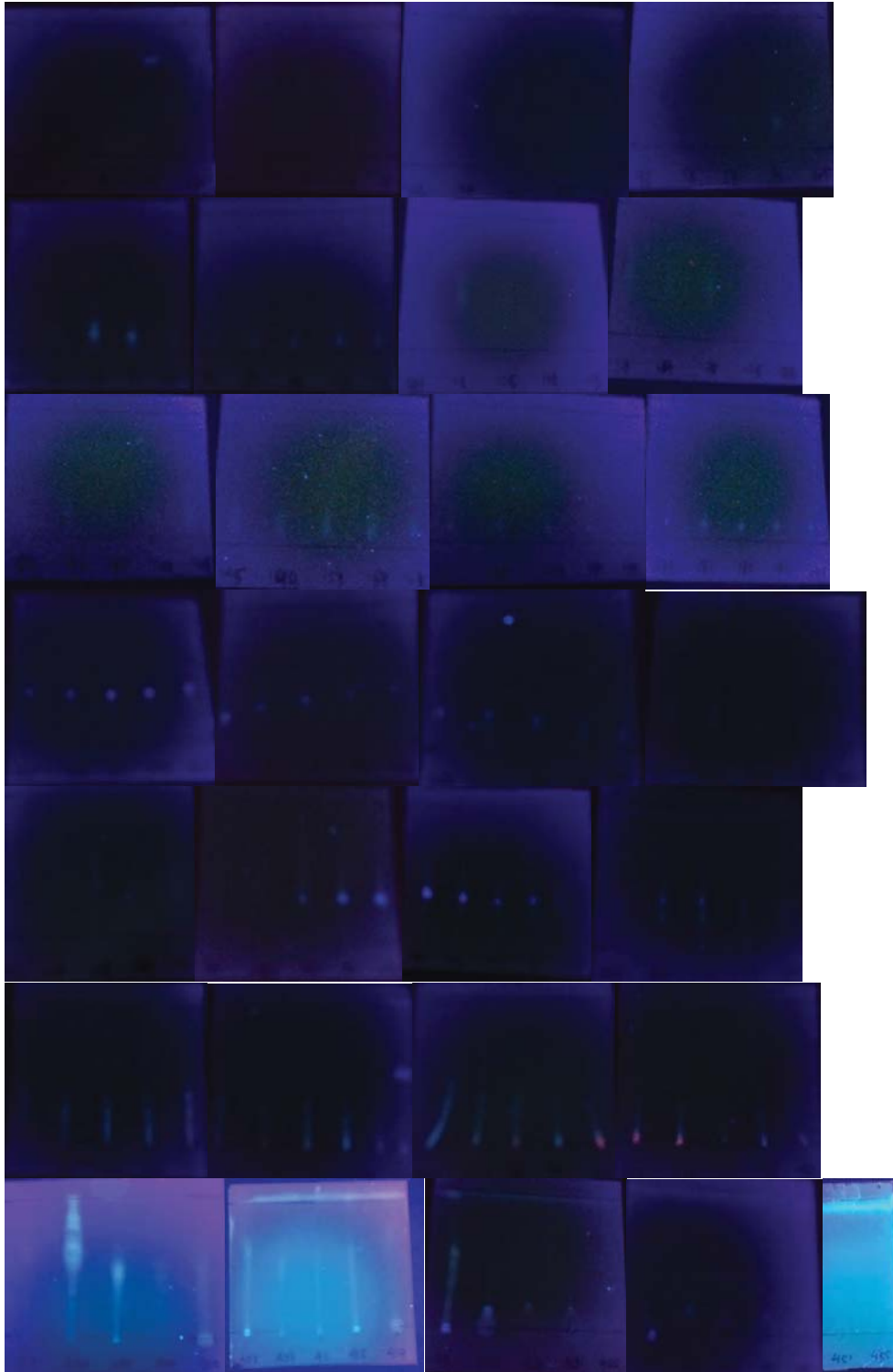
### Profil Kromatogram Fraksi Hasil KKT Pertama






### Profil Kromatogram Hasil KKT kedua





**Lampiran 4 Hasil Determinasi**

 KEMENTERIAN RISET TEKNOLOGI DAN PENDIDIKAN TINGGI  
UNIVERSITAS TANJUNGPURA  
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM  
**LABORATORIUM BIOLOGI**  
Jalan Ahmad Yani, Pontianak 78124,  
Telp/Fax. : 0561-577963 e-mail: info@mipa.untan.ac.id

Lampiran 1

**Hasil Determinasi Alga**


Nama Pengirim : Dr. Ajuk Sapar  
Jenis Sampel : Alga  
Tanggal Terima : 16 Mei 2019

**Klasifikasi:**

Kingdom : *Plantae*  
Divisi : *Phaeophyta*  
Kelas : *Phaeophyceae*  
Ordo : *Dactyotales*  
Famili : *Dactyotaceae*  
Genus : *Padina*  
Spesies : *Padina minor*

Catatan : Pengambilan Sampel di luar tanggung jawab Laboratorium

Kepala Laboratorium Biologi  
Fakultas MIPA Universitas Tanjungpura

  
Mukarlina, S.Si., M.Si.  
NIP. 196804062000032001