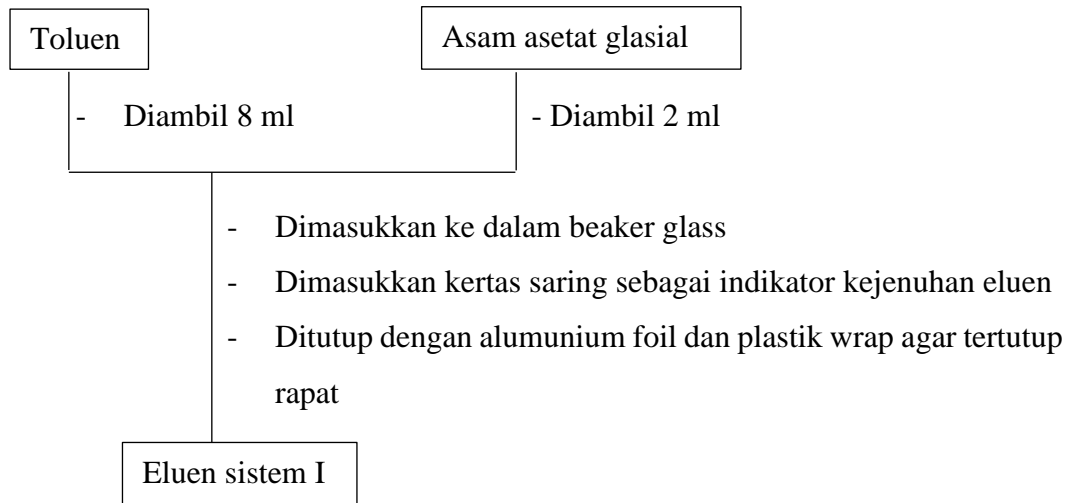


## LAMPIRAN

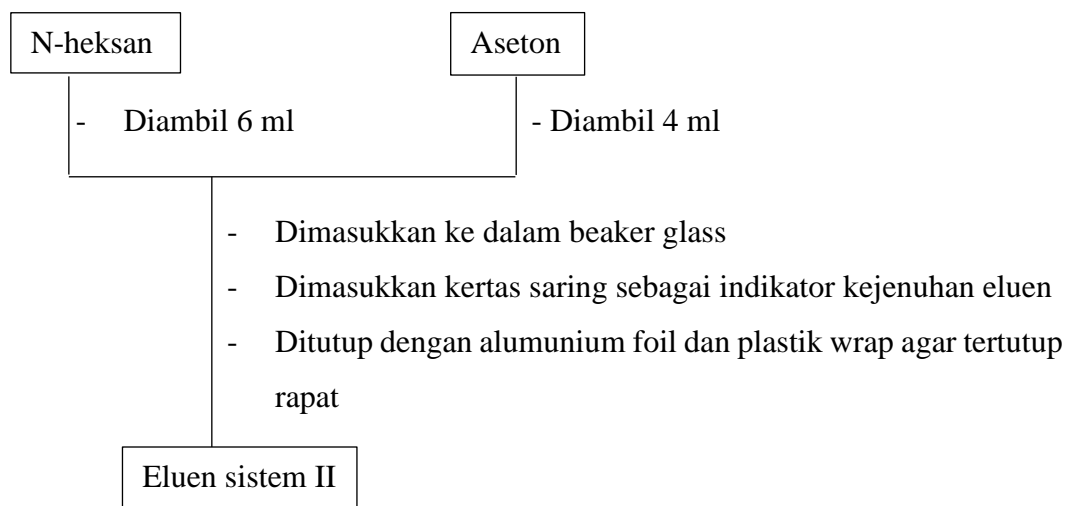
### Skema kerja

a. Pembuatan eluen sebagai fase gerak (10 ml)

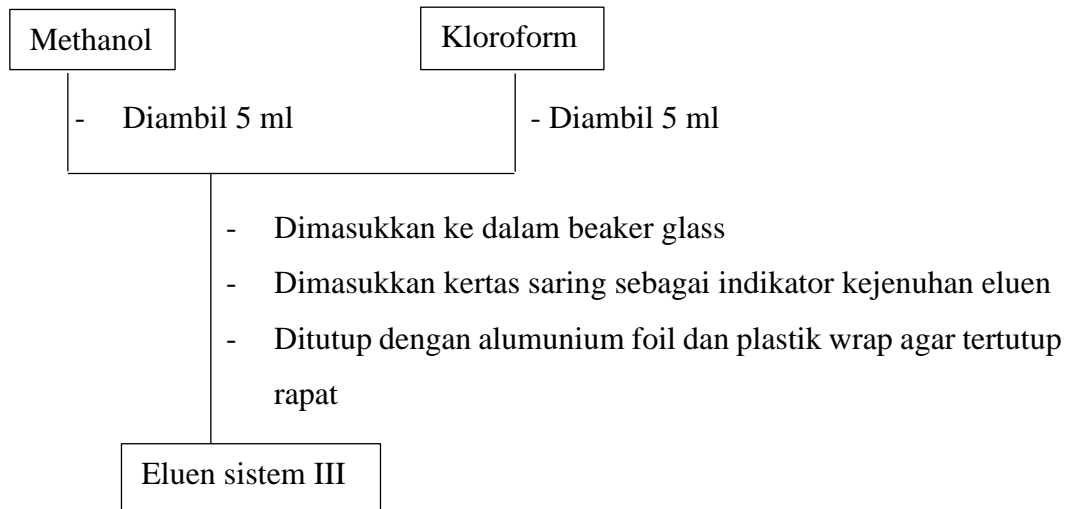
- Sistem I (toluen:asam asetat glasial {8:2}) :



- Sistem II (n-heksan:aseton {3:2}) :

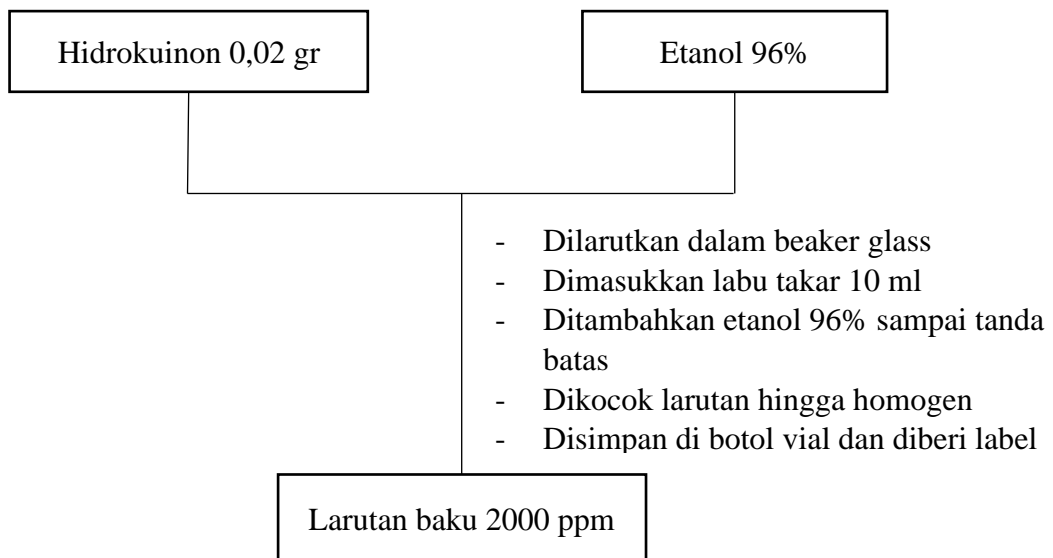


- Sistem III (methanol:kloroform {1:1}) :

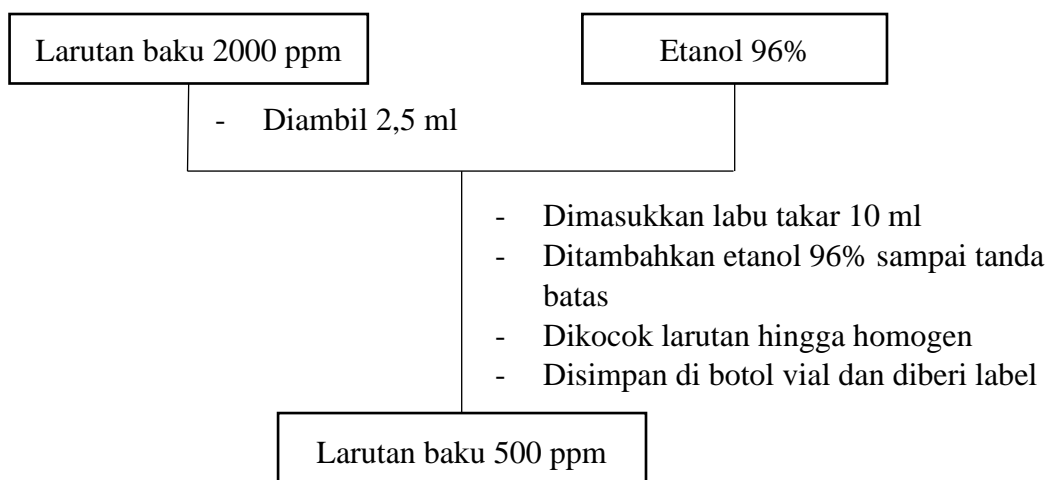


b. Pembuatan larutan baku

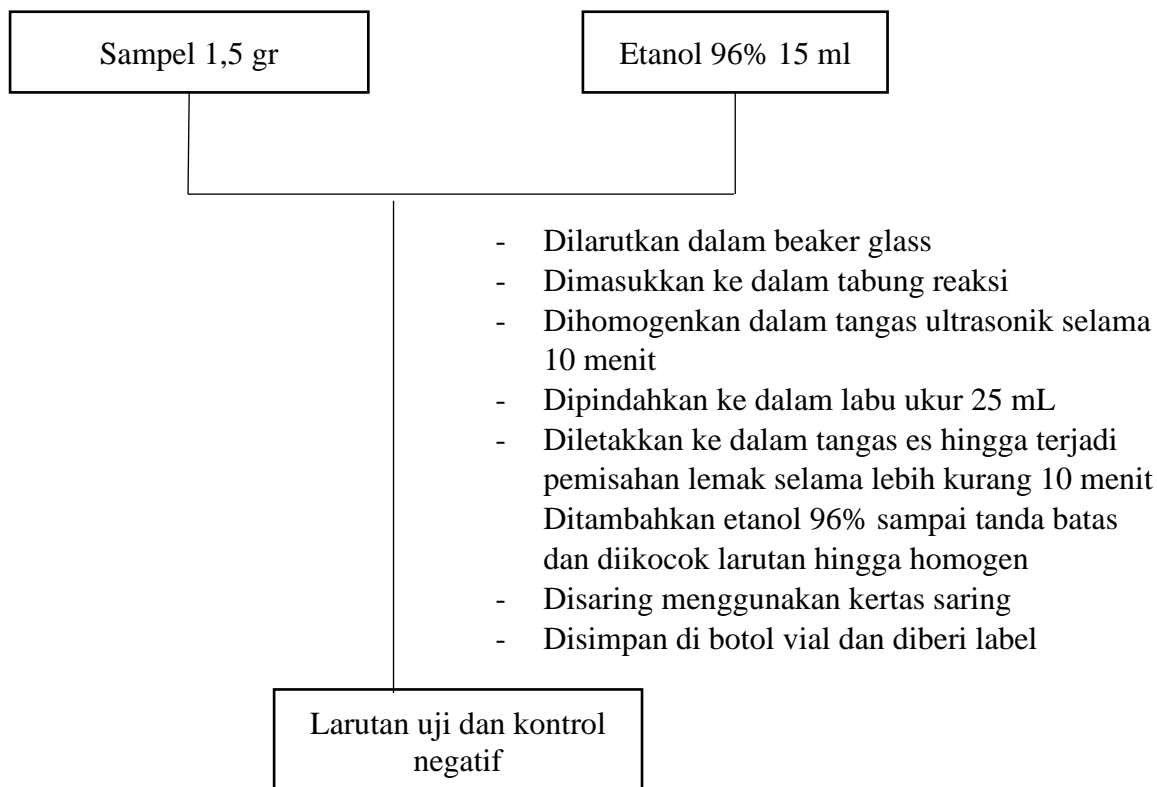
- Larutan baku 2000 ppm



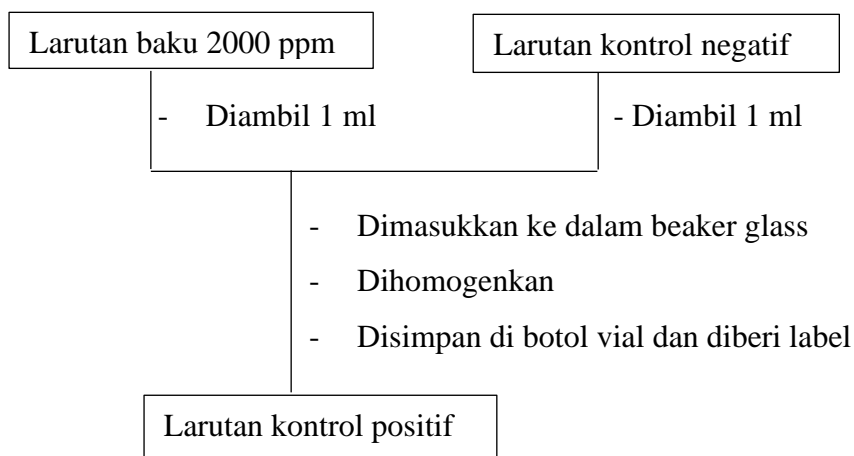
- Larutan baku 500 ppm



c. Pembuatan larutan uji



d. Pembuatan spike sampel (kontrol positif)



e. Pengujian

Larutan baku 2000 ppm, larutan baku 500 ppm,  
larutan kontrol positif, larutan kontrol negatif,  
larutan sampel A, larutan sampel , larutan sampel C

- Ditotolkan secara terpisah masing-masing larutan menggunakan pipa kapiler pada plat yang sudah diberi batas atas dan batas bawah
- Dimasukkan plat ke dalam chamber yang berisi eluen dan ditutup rapat
- Dielusi plat dalam chamber hingga jarak rambat mencapai lebih kurang 8 cm dari titik penotolan
- Dipindahkan plat, dan dikeringkan pada suhu ruang
- Dideteksi dengan mengamati plat di bawah penyinaran lampu UV 254 nm, dan ditandai posisi bercak

Hasil KLT

**Perhitungan**

a. Indeks polaritas fase gerak

Pelarut	Indeks Polaritas
Khloroform	4,1
Methanol	5,1
Toluen	2,4
Asam asetat glasial	6,2
N-heksan	0,1
Aseton	5,1

- Fase gerak I (Toluen: Asam asetat glasial {8:2})

$$\begin{aligned} &= \left( \frac{\text{volume pelarut 1}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 1} \right) + \left( \frac{\text{volume pelarut 2}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 2} \right) \\ &= \left( \frac{8}{10} \times 2,4 \right) + \left( \frac{2}{10} \times 6,2 \right) \\ &= 3,16 \end{aligned}$$

- Fase gerak II (N-heksan: Aseton {3:2})

$$= \left( \frac{\text{volume pelarut 1}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 1} \right) + \left( \frac{\text{volume pelarut 2}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 2} \right)$$

$$= \left( \frac{6}{10} \times 0,1 \right) + \left( \frac{4}{10} \times 5,1 \right)$$

$$= 2,1$$

- Fase gerak III (Methanol: Kloroform {1:1})

$$= \left( \frac{\text{volume pelarut 1}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 1} \right) + \left( \frac{\text{volume pelarut 2}}{\text{volume campuran}} \times \text{indeks polaritas pelarut 2} \right)$$

$$= \left( \frac{5}{10} \times 5,1 \right) + \left( \frac{5}{10} \times 4,1 \right)$$

$$= 4,6$$

b. Pembuatan larutan baku

- Larutan baku 2000 ppm

Diketahui : M Hidrokuinon = 2000 ppm = 2000 mg/L  
 Volume larutan = 10 ml = 0,01 mL

Ditanya : Massa Hidrokuinon yang dibutuhkan?

Dijawab : M =  $\frac{\text{massa (mg)}}{\text{volume (L)}}$   
 2000 mg/L =  $\frac{\text{massa (mg)}}{0,01 \text{ L}}$   
 Massa = 10 mg

- Larutan baku 500 ppm

Diketahui : M<sub>1</sub> = 2000 ppm  
 M<sub>2</sub> = 500 ppm  
 V<sub>2</sub> = 10 ml

Ditanya : Volume (V<sub>1</sub>) yang dibutuhkan?

Dijawab : M<sub>1</sub> x V<sub>1</sub> = M<sub>2</sub> x V<sub>2</sub>  
 2000 ppm x V<sub>1</sub> = 500 ppm x 10 ml  
 V<sub>1</sub> = 2,5 ml

c. Perhitungan nilai R<sub>f</sub>

- Sistem I

- Larutan baku 2000 ppm = -
- Larutan baku 500 ppm = -
- Larutan kontrol positif

Diketahui : Jarak eluen = 8 cm  
 Jarak sampel = 6,4 cm

Ditanya : Nilai R<sub>f</sub> sampel?

Dijawab : Nilai Rf =  $\frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}}$   
=  $\frac{6,4 \text{ cm}}{8 \text{ cm}}$   
= 0,8

➤ Larutan kontrol negatif I

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 6,4 cm

Ditanya : Nilai Rf sampel?

Dijawab : Nilai Rf =  $\frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}}$   
=  $\frac{6,4 \text{ cm}}{8 \text{ cm}}$   
= 0,8

➤ Larutan kontrol negatif II

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 6,4 cm

Ditanya : Nilai Rf sampel?

Dijawab : Nilai Rf =  $\frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}}$   
=  $\frac{6,4 \text{ cm}}{8 \text{ cm}}$   
= 0,81

• Sistem II

➤ Larutan baku 10000 ppm = -

➤ Larutan baku 5000 ppm = -

➤ Larutan kontrol positif

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 7,6 cm

Ditanya : Nilai Rf sampel?

Dijawab : Nilai Rf =  $\frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}}$   
=  $\frac{7,6 \text{ cm}}{8 \text{ cm}}$   
= 0,95

➤ Larutan kontrol negatif I

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 7,6 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{7,6 \text{ cm}}{8 \text{ cm}} \\ &= 0,95\end{aligned}$$

➤ Larutan kontrol negatif II

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 7,5 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{7,5 \text{ cm}}{8 \text{ cm}} \\ &= 0,93\end{aligned}$$

• Sistem III

➤ Larutan baku 10000 ppm

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 6 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{6 \text{ cm}}{8 \text{ cm}} \\ &= 0,75\end{aligned}$$

➤ Larutan baku 5000 ppm

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 6 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{6 \text{ cm}}{8 \text{ cm}} \\ &= 0,75\end{aligned}$$

➤ Larutan kontrol positif

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 4,5 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned} \text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{4,5 \text{ cm}}{8 \text{ cm}} \\ &= 0,56 \end{aligned}$$

➤ Larutan kontrol negatif I

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 5 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned} \text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{5 \text{ cm}}{8 \text{ cm}} \\ &= 0,62 \end{aligned}$$

➤ Larutan kontrol negatif II

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 5,2 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned} \text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{5,2 \text{ cm}}{8 \text{ cm}} \\ &= 0,65 \end{aligned}$$

➤ Larutan baku 10000 ppm (plat ke 2)

Diketahui : Jarak eluen = 8 cm  
Jarak sampel = 5,2 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned} \text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{5,2 \text{ cm}}{8 \text{ cm}} \\ &= 0,65 \end{aligned}$$

➤ Larutan kontrol positif (plat ke 2)

Diketahui : Jarak eluen = 8 cm



Jarak sampel = 4 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{4 \text{ cm}}{8 \text{ cm}} \\ &= 0,5\end{aligned}$$

➤ Larutan sampel A

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 2 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{2 \text{ cm}}{8 \text{ cm}} \\ &= 0,25\end{aligned}$$

➤ Larutan sampel B

Diketahui : Jarak eluen = 8 cm

Jarak sampel = 4,5 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{4,5 \text{ cm}}{8 \text{ cm}} \\ &= 0,56\end{aligned}$$

➤ Larutan sampel C

Diketahui : Jarak eluen = 8 cm

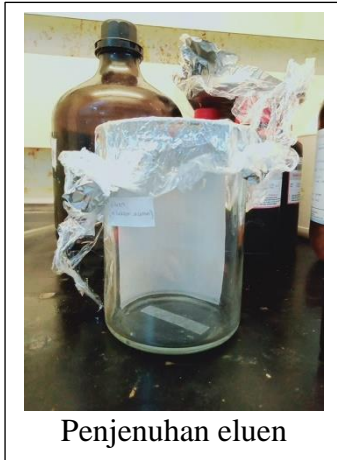
Jarak sampel = 2,5 cm

Ditanya : Nilai Rf sampel?

$$\begin{aligned}\text{Dijawab : Nilai Rf} &= \frac{\text{jarak elusi sampel (cm)}}{\text{jarak elusi eluen (cm)}} \\ &= \frac{2,5 \text{ cm}}{8 \text{ cm}} \\ &= 0,31\end{aligned}$$

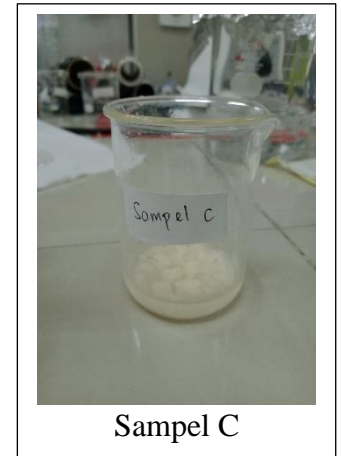
## Dokumentasi Penelitian

### Pembuatan eluen

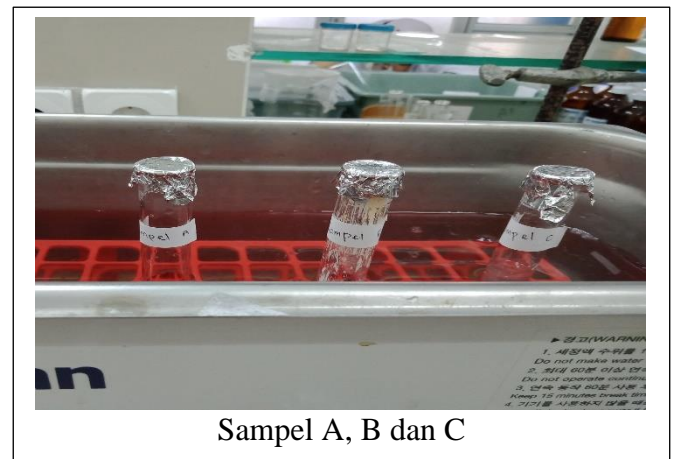
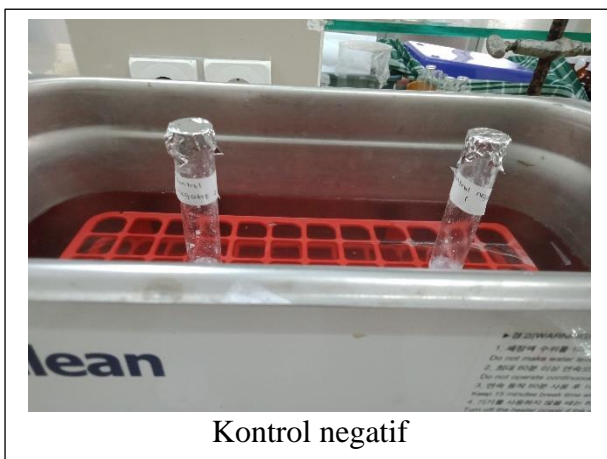


### Pembuatan larutan

#### Pengenceran



### Dihomogenkan di sonikator bath



Hasil setelah disonikator bath



Kontrol negatif



Sampel A



Sampel B

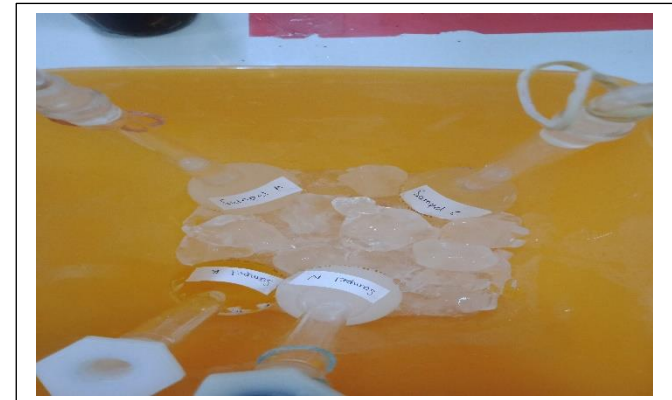


Sampel C

Pemisahan lemak pada es



Kontrol negatif



Sampel A, B dan C

Hasil pemisahan lemak pada es



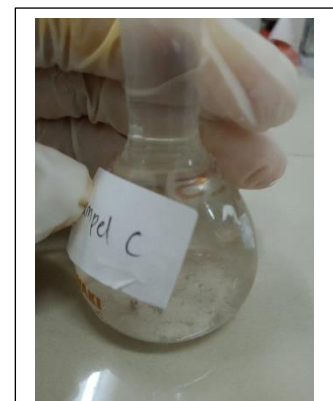
Kontrol negatif



Sampel A



Sampel B



Sampel C

## Penyaringan



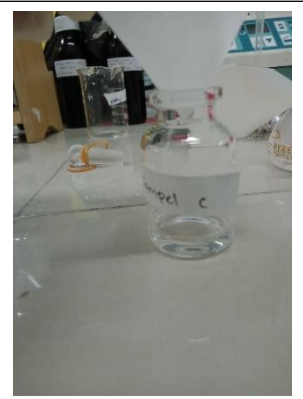
Kontrol negatif



Sampel A

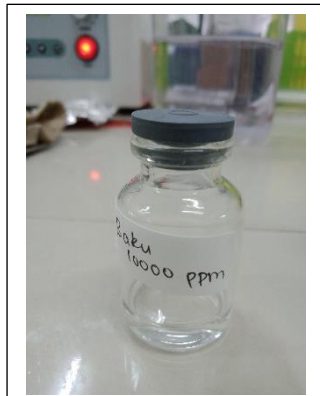


Sampel B



Sampel C

## Hasil Larutan



Baku 10000 ppm



Baku 5000 ppm



Kontrol positif



Kontrol negatif I



Kontrol negatif II



Sampel A



Sampel B

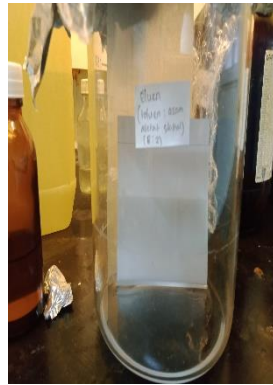


Sampel C

## Pengujian



Penotolan pada plat



Proses elusi sistem I



Proses elusi sistem II



Proses elusi sistem III

## Hasil elusi



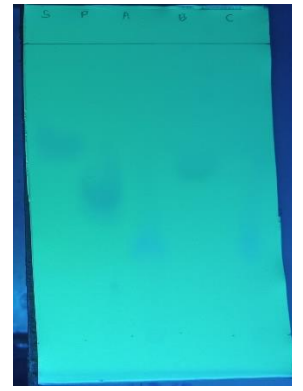
Sistem I



Sistem II



Sistem III



Sistem III