

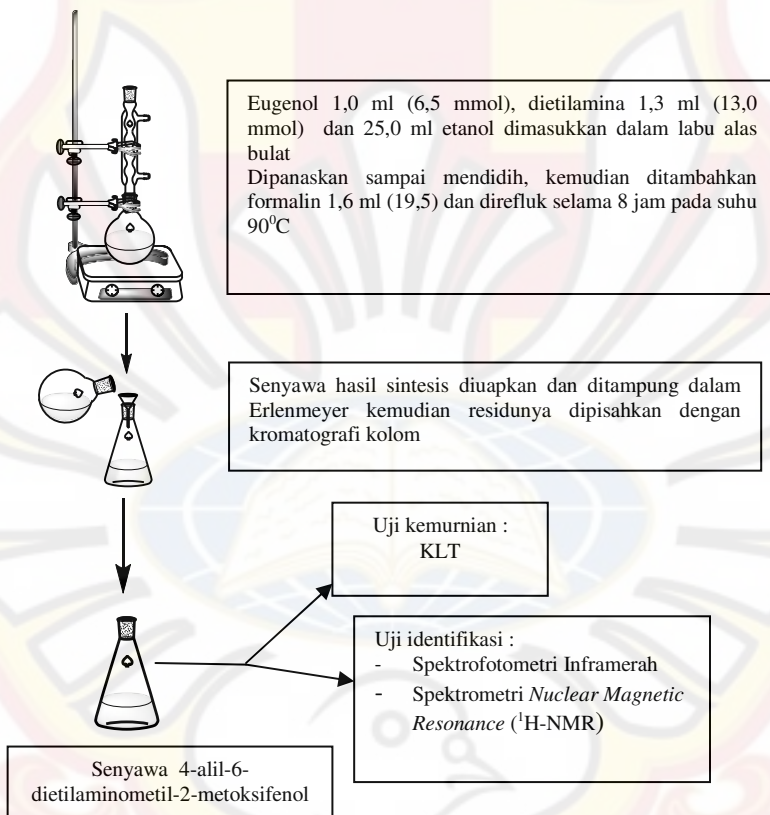
LAMPIRAN A
GAMBAR ALAT SINTESIS



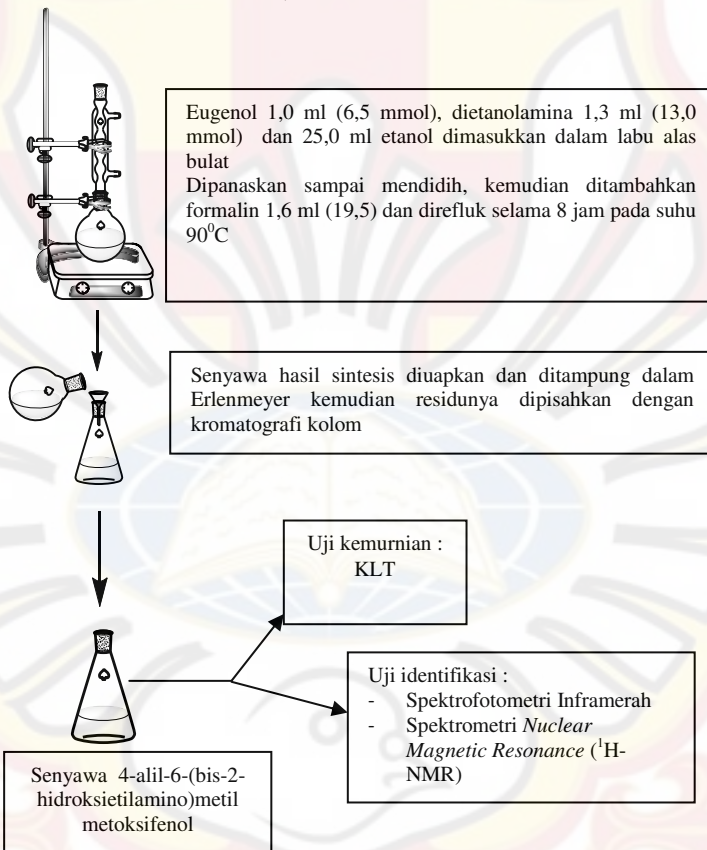
LAMPIRAN B
GAMBAR ALAT KROMATOGRAFI KOLOM



LAMPIRAN C
SKEMA KERJA SINTESIS SENYAWA 4-ALIL-6-DIETILAMINOMETIL-2-METOKSIFENOL



LAMPIRAN D
SKEMA KERJA SINTESIS SENYAWA 4-ALIL-6-(BIS-2-HIDROKSIEETILAMINO)METIL-2-METOKSIFENOL



LAMPIRAN E
PERHITUNGAN BERAT TEORITIS 4-ALIL-6-
DIETILAMINOMETIL-2-METOKSIFENOL DAN 4-ALIL-6-(BIS-2-
HIDROKSJETILAMINO)METIL-2-METOKSIFENOL

- **Eugenol** (BM=164,2 BJ=1,067 g/cm³)
 Jika eugenol 1 mol $\longrightarrow$ dengan diinginkan 1 ml

$$\text{mmol eugenol} = \frac{1,067 \times 1 \times 1000}{164,2} = 6,50$$
- **Formalin** (BM=30,03), 37%
 Jika 3 mol $\longrightarrow$ 3 x mmol eugenol = 19,4946 mmol
- **Dietilamina** (BM=73,14 BJ= 0,7074 g/cm³)
 Jika 2 mol $\longrightarrow$ 2 x mmol eugenol = 12,9964 mmol
- **Dietanolamina** (BM=105,14 BJ=1,0881 g/ cm³)
 Jika 2 mol $\longrightarrow$ 2 x mmol eugenol = 12,9964 mmol
- **4-alil-6-dietilaminometil-2-metoksifenol** (BM=249,35)
 - Replikasi I : mmol teoritis = 6,48 mmol
 Berat teoritis = 6,48 x 249,35 = 1,616 g
 - Replikasi II : mmol teoritis = 6,50 mmol
 Berat teoritis = 6,50 x 249,35 = 1,621 g
 - Replikasi III : mmol teoritis = 6,49 mmol
 Berat teoritis = 6,49 x 249,35 = 1,618 g
- **4-alil-6-(bis-2-hidroksietilamino)metil-2-metoksifenol** (BM=296,38)
 - Replikasi I : mmol teoritis = 6,50 mmol
 Berat teoritis = 6,50 x 296,38 = 1,926 g

Replikasi II : mmol teoritis = 6,50 mmol
Berat teoritis = $6,50 \times 296,38 = 1,926 \text{ g}$
Replikasi III : mmol teoritis = 6,49 mmol
Berat teoritis = $6,49 \times 296,38 = 1,924 \text{ g}$



LAMPIRAN F
PERHITUNGAN PERSENTASE HASIL 4-ALIL-6-DIETILAMINOMETIL-2-METOKSIFENOL DAN 4-ALIL-6-(BIS-2-HIDROKSIEETILAMINO)METIL-2-METOKSIFENOL

- **4-alil-6-dietilaminometil-2-metoksifenol (BM=249,35)**

Berat praktis diperoleh dari penimbangan

Replikasi I

$$\begin{array}{lcl} \text{Berat} & : & 0,490 \text{ g} \\ \text{Persentase hasil} & : & 0,490 \times \frac{100 \%}{1,616} = 30 \% \end{array}$$

Replikasi II

$$\begin{array}{lcl} \text{Berat} & : & 0,475 \text{ g} \\ \text{Persentase hasil} & : & 0,475 \times \frac{100 \%}{1,621} = 29 \% \end{array}$$

Replikasi III

$$\begin{array}{lcl} \text{Berat} & : & 0,497 \text{ g} \\ \text{Persentase hasil} & : & 0,497 \times \frac{100 \%}{1,618} = 31 \% \end{array}$$

$$\% \text{ rata-rata} = \frac{30 \% + 29 \% + 31 \%}{3} = 30 \%$$

- **4-alil-6-(bis-2-hidroksietilamino)metil-2-metoksifenol (BM=296,38)**

Replikasi I

$$\begin{array}{lcl} \text{Berat} & : & 1,398 \text{ g} \\ \text{Persentase hasil} & : & 1,398 \times \frac{100 \%}{1,926} = 73 \% \end{array}$$

Replikasi II

$$\begin{array}{lcl} \text{Berat} & : & 1,350 \text{ g} \\ \text{Persentase hasil} & : & 1,350 \times \frac{100 \%}{1,926} = 70 \% \end{array}$$

Replikasi I

Berat : 1,412 g

Persentase hasil : $1,412 \times \frac{100 \%}{1,924} = 74 \%$

% rata-rata = $\frac{73 \% + 70 \% + 74 \%}{3} = 72 \%$