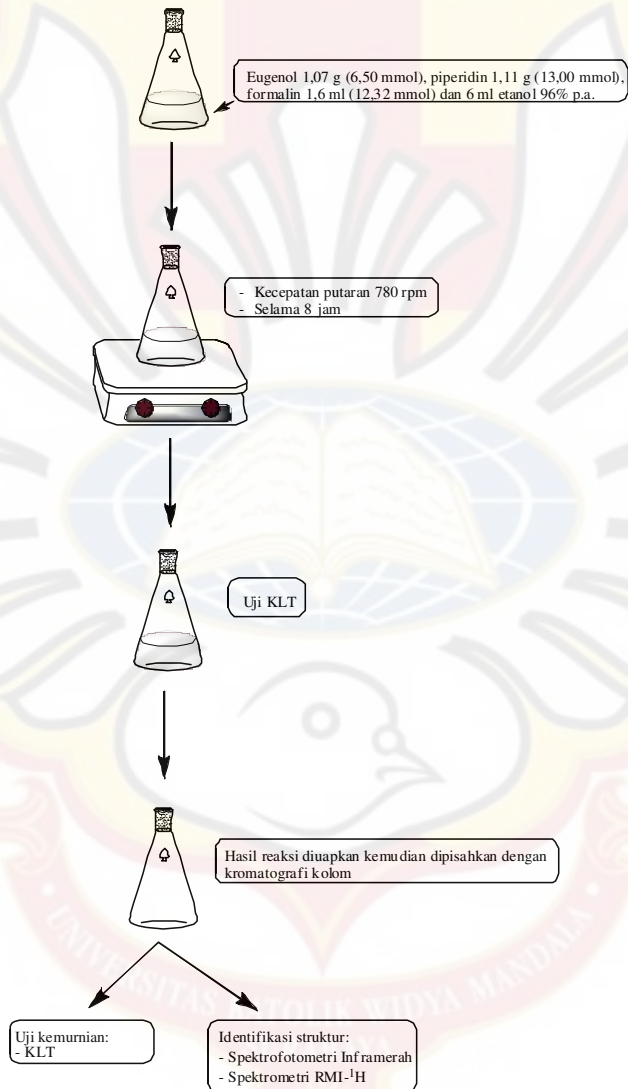
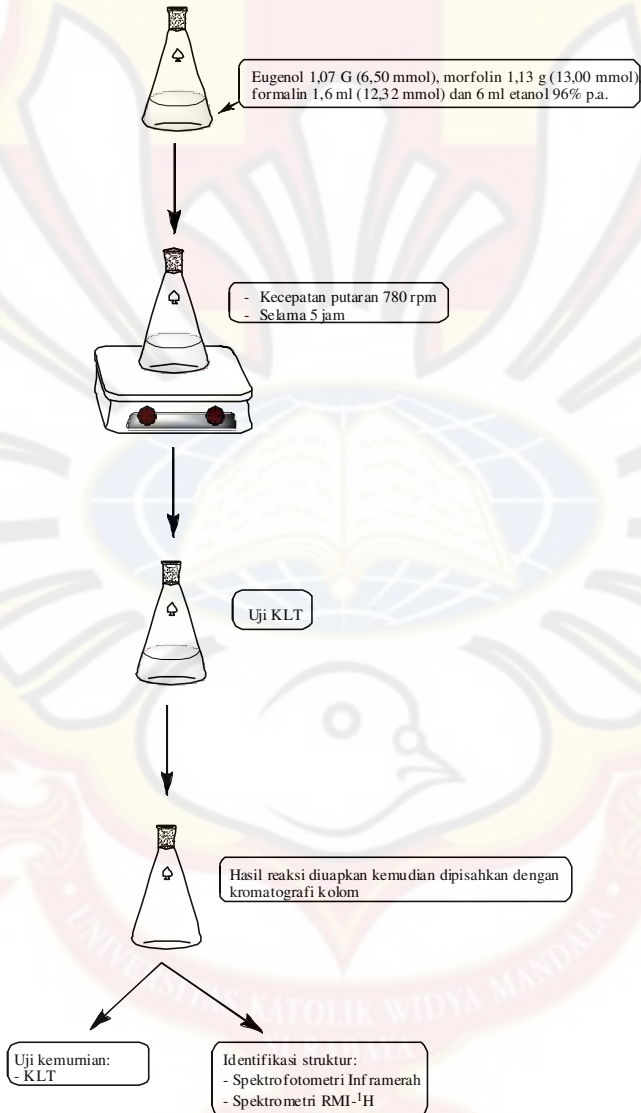


LAMPIRAN A
SKEMA SINTESIS 4-ALIL-2-METOKSI-6-PIPERIDINOMETILFENOL

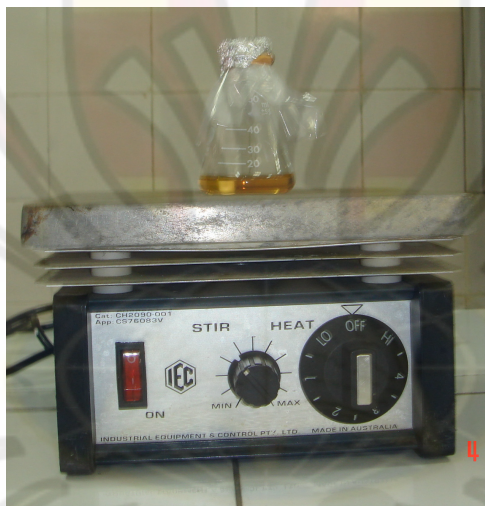


LAMPIRAN B

SKEMA SINTESIS 4-ALIL-2-METOKSI-6-MORFOLINOILMETILFENOL



LAMPIRAN C
FOTO ALAT SINTESIS



LAMPIRAN D
FOTO ALAT KROMATOGRAFI KOLOM



LAMPIRAN E

PERHITUNGAN BERAT TEORITIS 4-ALIL-2-METOKSI-6-PIPERIDINOLMETIL FENOL DAN 4-ALIL-2-METOKSI-6-MORFOLINOMETILFENOL

- **Eugenol** (BM=164,2 BJ=1,067 g/cm³)

Jika eugenol 1 mol $\longrightarrow$ dengan diinginkan 1 ml

$$\text{mmol eugenol} = \frac{1,067 \times 1 \times 1000}{164,2} = 6,50 \text{ mmol}$$

Digunakan perbandingan rasio mol antara eugenol:amina:formaldehida

$$\longrightarrow 1 : 2 : 3$$

- **Piperidin** (BM=85,15 BJ=0,8622 g/cm³)

Jika perbandingan rasio 2 $\longrightarrow$ 2 x mmol eugenol = 13,00 mmol

- **Morfolin** (BM=87,12 BJ=1,007 g/cm³)

Jika perbandingan rasio 2 $\longrightarrow$ 2 x mmol eugenol = 13,00 mmol

- **Formaldehida** (BM=30,03), (digunakan formalin dengan kadar formaldehida $\pm$ 37 %)

Jika perbandingan rasio 3 $\longrightarrow$ 3 x mmol eugenol = 19,50 mmol
(100% formaldehida)

$$37 \% = \frac{37 \text{ g}}{100 \text{ ml}} = 0,37 \text{ g/ml}$$

$$\text{mmol formalin} = \frac{0,37}{30,03} = 12,32 \text{ mmol}$$

$$\text{ml formalin} = \frac{19,50}{12,32} = 1,6 \text{ ml}$$

Eugenol + formaldehida + piperidin → 4-alil-2-metoksi-6-piperidinometilfenol
 6,50 mmol 19,50 mmol 13,00 mmol 6,50 mmol

Eugenol + formaldehida + morfolin → 4-alil-2-metoksi-6-morfolinometilfenol
 6,50 mmol 19,50 mmol 13,00 mmol 6,50 mmol

- **4-alil-2-metoksi-6-piperidinometilfenol** (BM=261,56)

mmol teoritis = 6,50 mmol

berat teoritis = $\frac{6,50 \times 261,56}{1000} = 1,70 \text{ gram}$

- **4-alil-2-metoksi-6-morfolinometilfenol** (BM=263,33)

mmol teoritis = 6,50 mmol

berat teoritis = $\frac{6,50 \times 263,33}{1000} = 1,71 \text{ gram}$

LAMPIRAN F

PERHITUNGAN PRESENTASI HASIL 4-ALIL-2-METOKSI-6-PIPERIDINOMETILFENOL

Berat molekul 4-alil-2-metoksi-6-piperidinometilfenol = 261,56

mmol teoritis 4-alil-2-metoksi-6-piperidinometilfenol = 6,50 mmol

- Replikasi 1

Berat Teoritis = 1,70 gram

Berat Praktis = 1,00 gram

$$\text{Presentasi Hasil} = \frac{1,00}{1,70} \times 100 \% = 58 \%$$

- Replikasi 2

- Berat Teoritis = 1,70 gram

- Berat Praktis = 1,08 gram

$$\text{Presentasi Hasil} = \frac{1,08}{1,70} \times 100 \% = 64 \%$$

- Replikasi 3

- Berat Teoritis = 1,70 gram

- Berat Praktis = 0,98 gram

$$\text{Presentasi Hasil} = \frac{1,08}{1,70} \times 100 \% = 57 \%$$

LAMPIRAN G
PERHITUNGAN PRESENTASI HASIL 4-ALIL-2-METOKSI-6-MORFOLINOMETILFENOL

Berat molekul 4-alil-2-metoksi-6-morfolinometilfenol = 263,33

mmol teoritis 4-alil-2-metoksi-6-morfolinometilfenol = 6,50 mmol

- Replikasi 1

Berat Teoritis = 1,71 gram

Berat Praktis = 0,77 gram

$$\text{Presentasi Hasil} = \frac{0,77}{1,71} \times 100 \% = 45 \%$$

- Replikasi 2

- Berat Teoritis = 1,71 gram

- Berat Praktis = 0,82 gram

$$\text{Presentasi Hasil} = \frac{0,82}{1,71} \times 100 \% = 48 \%$$

- Replikasi 3

- Berat Teoritis = 1,71 gram

- Berat Praktis = 0,85 gram

$$\text{Presentasi Hasil} = \frac{0,85}{1,71} \times 100 \% = 50 \%$$