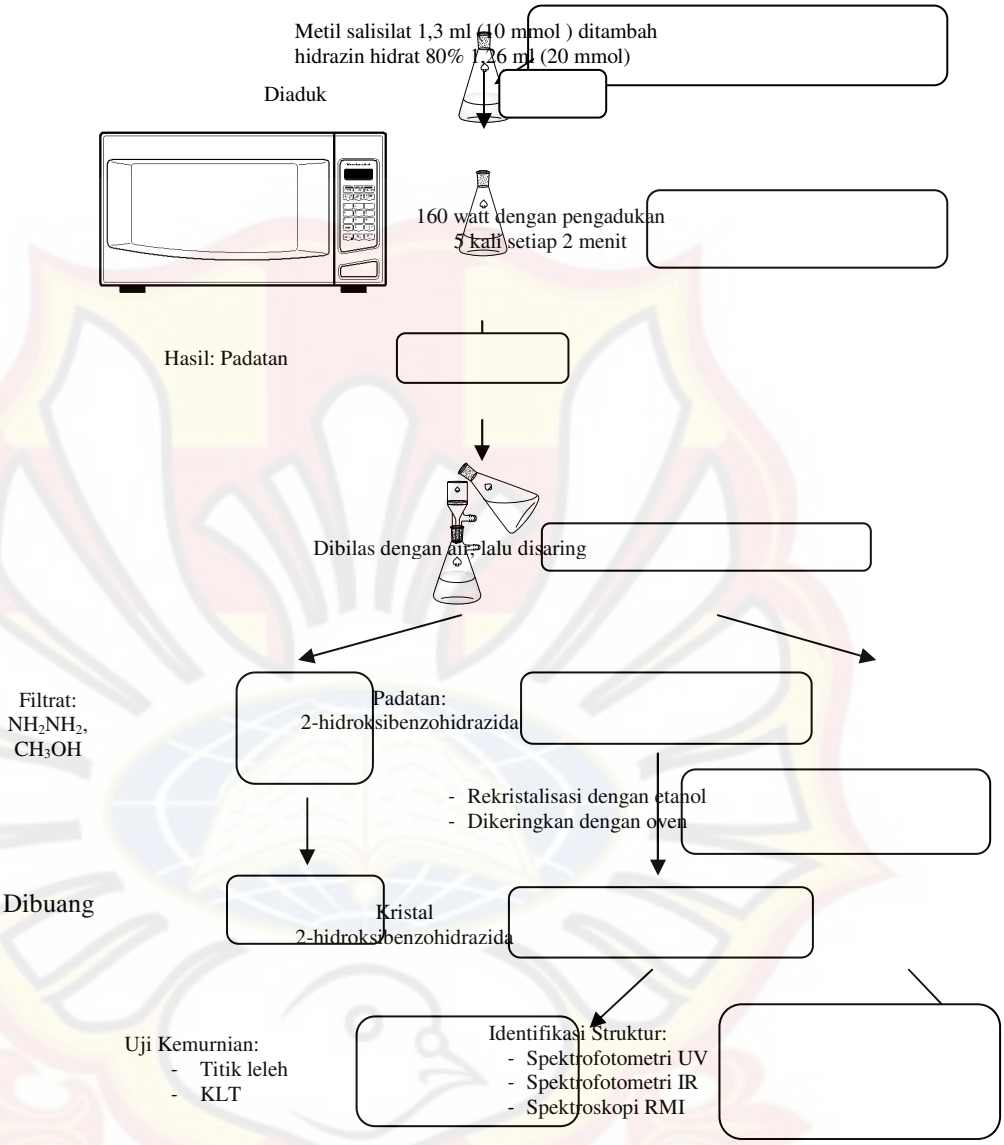
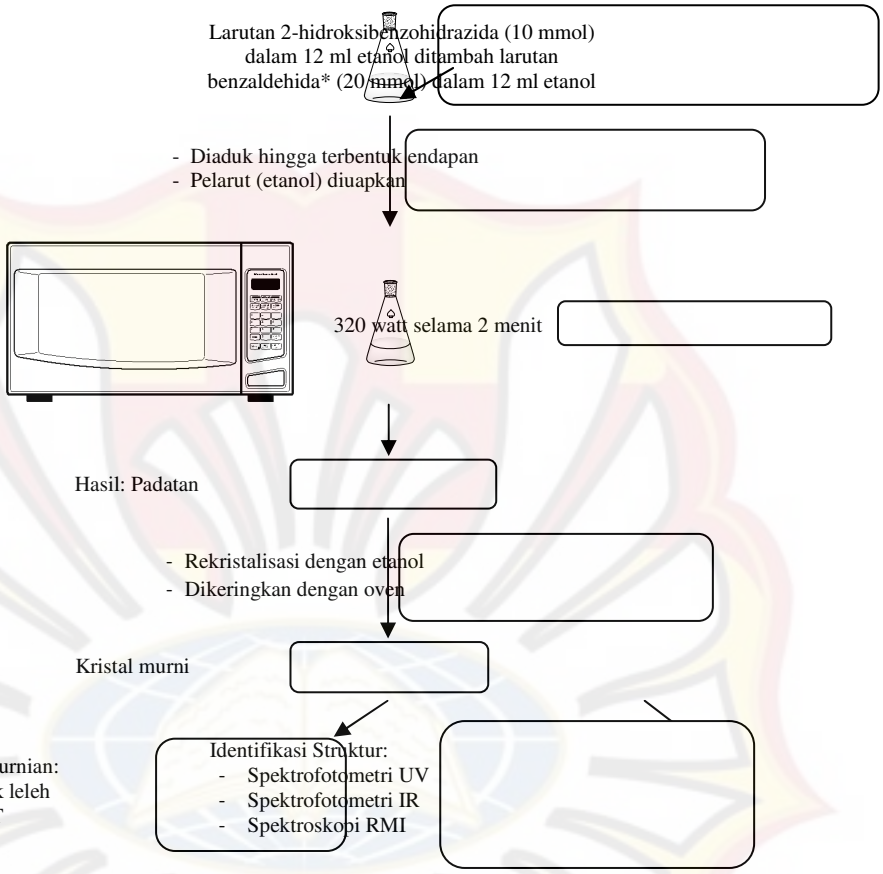
LAMPIRAN A

SKEMA SINTESIS 2-HIDROKSIBENZOHIDRAZIDA



LAMPIRAN B
SKEMA SINTESIS N'-BENZILIDEN-2-HIDROKSIBENZOHIDRAZIDA, N'-(2-KLOROBENZILIDEN)-2-HIDROKSIBENZOHIDRAZIDA, N'-(2,4-DIKLOROBENZILIDEN)-2-HIDROKSIBENZOHIDRAZIDA



* keterangan:

- Untuk sintesis N'-benziliden-2-hidroksibenzohidrazida menggunakan benzaldehida sebanyak 2,0 ml (20 mmol)
- Untuk sintesis N'-(2-klorobenziliden)-2-hidroksibenzohidrazida menggunakan 2-klorobenzaldehida sebanyak 2,26 ml (20 mmol)
- Untuk sintesis N'-2,4-diklorobenziliden-2-hidroksibenzohidrazida menggunakan 2,4-diklorobenzaldehida sebanyak 3,5 g (20 mmol)

LAMPIRAN C

PERHITUNGAN BERAT TEORITIS

2-HIDROKSIBENZOHIDRAZIDA

1. Metil salisilat (BM = 152,15; BJ = 1,184)

volume metil salisilat = 1,3 ml

mmol metil salisilat = $\frac{1,3 \times 1,184}{152,15} \times 1000 = 10,12$ mmol

2. Hidrazin hidrat (BM = 50,05; BJ = 1,03)

volume hidrazin hidrat = 1,2 ml

mmol hidrazin hidrat = $\frac{1,2 \times 1,03}{50,05} \times 1000 = 24,70$ mmol

Metil salisilat	+	hidrazin hidrat	⟶	2-hidroksibenzohidrazida
10,12 mmol		24,70 mmol		-
10,12 mmol		10,12 mmol		10,12 mmol
0 mmol		14,58 mmol		10,12 mmol

Jadi didapatkan mmol teoritis 2-hidroksibenzohidrazida = 10,12 mmol

3. 2-hidroksibenzohidrazida (BM = 152,15)

mmol teoritis = 10,12 mmol

berat teoritis = 10,12 x 152,15 = 1539,76 mgram = 1,54 gram

LAMPIRAN D

PERHITUNGAN PERSENTASE HASIL SINTESIS 2-HIDROKSIBENZOHIDRAZIDA

Berat molekul 2-hidroksibenzohidrazid = 152,15

1. Sintesis I

berat praktis = 1,19 gram

mmol praktis = $\frac{1,19}{152,15} \times 1000 = 7,82 \text{ mmol}$

mmol teoritis = 10,12 mmol

persentase hasil = $\frac{7,82}{10,12} \times 100\% = 77,27\%$

2. Sintesis II

berat praktis = 1,21 gram

mmol praktis = $\frac{1,21}{152,15} \times 1000 = 7,95 \text{ mmol}$

mmol teoritis = 10,12 mmol

persentase hasil = $\frac{7,95}{10,12} \times 100\% = 78,55\%$

3. Sintesis III

berat praktis = 1,15 gram

mmol praktis = $\frac{1,15}{152,15} \times 1000 = 7,56 \text{ mmol}$

mmol teoritis = 10,12 mmol

persentase hasil = $\frac{7,56}{10,12} \times 100\% = 74,70\%$

Persentase hasil rata-rata = $\frac{77,27\% + 78,55\% + 74,70\%}{3} = 76,84\% \approx 77\%$

LAMPIRAN E

PERHITUNGAN BERAT TEORITIS
N'-BENZILIDEN-2-HIDROKSIBENZOHIDRAZIDA

1. **2-hidroksibenzohidrazid**
   mmol teoritis = 10,12 mmol

2. **Benzaldehida** (BM = 106,12, BJ = 1,046)
   volume benzaldehida = 2,0 ml
   mmol benzaldehida = $\frac{2,0 \times 1,046}{106,12} \times 1000 = 19,71$ mmol

   2-hidroksibenzohidrazida + benzaldehida ⟶ N'-benziliden-2-hidroksibenzohidrazida

10,12 mmol	19,71 mmol	-
10,12 mmol	10,12 mmol	10,12 mmol
0 mmol	9,59 mmol	10,12 mmol

   Jadi didapatkan mmol teoritis N'-benziliden-2-hidroksibenzohidrazida = 10,12 mmol

3. **N'-benziliden-2-hidroksibenzohidrazida (BM = 240,26)**
   mmol teoritis = 10,12 mmol
   berat teoritis = 10,12 x 240,26 = 2431,43 mgram = 2,43 gram

LAMPIRAN F

PERHITUNGAN PERSENTASE HASIL SINTESIS N'-BENZILIDEN-2-HIDROKSIBENZOHIDRAZIDA

Berat molekul N'-benziliden-2-hidroksibenzohidrazida = 240,26

1. **Sintesis I**

   berat praktis = 1,71 gram

   mmol praktis = $\frac{1,71}{240,26} \times 1000 = 7,12 \text{ mmol}$

   mmol teoritis = 10,12 mmol

   persentase hasil = $\frac{7,12}{10,12} \times 100\% = 70,36\%$

2. **Sintesis II**

   berat praktis = 1,78 gram

   mmol praktis = $\frac{1,78}{240,26} \times 1000 = 7,41 \text{ mmol}$

   mmol teoritis = 10,12 mmol

   persentase hasil = $\frac{7,41}{10,12} \times 100\% = 73,22\%$

3. **Sintesis III**

   berat praktis = 1,73 gram

   mmol praktis = $\frac{1,73}{240,26} \times 1000 = 7,20 \text{ mmol}$

   mmol teoritis = 10,12 mmol

   persentase hasil = $\frac{7,20}{10,12} \times 100\% = 71,15\%$

Persentase hasil rata-rata = $\frac{70,36\% + 73,22\% + 71,15\%}{3} = 71,58\% \approx 72\%$

LAMPIRAN G

UJI STATISTIK PERSENTASE HASIL SINTESIS

1. Uji *independent samples t-test* terhadap persentase hasil sintesis N'-benziliden-2-hidroksibenzohidrazida dan N'-(2-klorobenziliden)-2-hidroksibenzohidrazida.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Rendemen	Equal variances assumed	,000	1,000	2,940	4	,042	3,66667	1,24722	,20383	7,12950
	Equal variances not assumed			2,940	4,000	,042	3,66667	1,24722	,20383	7,12950

2. Uji *independent samples t-test* terhadap persentase hasil sintesis N'-benziliden-2-hidroksibenzohidrazida dan N'-(2,4-diklorobenziliden)-2-hidroksibenzohidrazida.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Rendemen	Equal variances assumed	,500	,519	6,485	4	,003	9,66667	1,49071	5,52779	13,80555
	Equal variances not assumed			6,485	3,670	,004	9,66667	1,49071	5,37666	13,95667

3. Uji *independent samples t-test* terhadap persentase hasil sintesis N'-(2-klorobenziliden)-2-hidroksibenzohidrazida dan N'-(2,4-diklorobenziliden)-2-hidroksibenzohidrazida.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR00002	Equal variances assumed	,500	,519	4,025	4	,016	6,00000	1,49071	1,86112	10,13888
	Equal variances not assumed			4,025	3,670	,019	6,00000	1,49071	1,70999	10,29001