
















## LAMPIRAN

Gambar	Keterangan
	Daun kembang bulan segar
	Tahap pencucian
	perajangan
	pengovenan

	<p>Simplisia daun kembang bulan</p>
	<p>Serbuk simplisia daun kembang bulan</p>
	<p>Penambahan larutan etanol 70% untuk maserasi</p>
	<p>Ekstrak kental</p>

	<p>Hasil uji pereaksi warna <math>\text{FeCl}_3</math> sampel 6 jam</p>
	<p>Hasil uji pereaksi warna <math>\text{FeCl}_3</math> sampel 10 jam</p>
	<p>Hasil uji pereaksi warna Mg dan HCl sampel 6 jam</p>
	<p>Hasil uji pereaksi warna Mg dan HCl sampel 10 jam</p>

	<p>Seri larutan standart</p>
	<p>Larutan sampel</p>
	<p>Isntrumen spektrofotometri UV-Vis Jasco V-760</p>

## PERHITUNGAN

### 1. Perhitungan Pembuatan Larutan

- Etanol 70%

$$\begin{aligned}K1.V1 &= K2.V2 \\96\% \times V1 &= 70\% \times 1000 \text{ ml} \\V1 &= 729,1 \text{ ml}\end{aligned}$$

Etanol 96% yang dibutuhkan sebanyak 729,1 ml

- AlCl<sub>3</sub> 10% sebanyak 5 ml

$$\frac{10}{100} \times 5 = 0,5$$

AlCl<sub>3</sub> yang dibutuhkan sebanyak 0.5 gram

- Kalium Asetat sebanyak 5 ml

$$\begin{aligned}M &= \frac{\text{massa}}{\text{mr}} \times \frac{1000}{v} \\1 &= \frac{x}{98,14} \times \frac{1000}{5}\end{aligned}$$

$$X = 0,4907$$

Kalium asetat yang dibutuhkan sebanyak 0,4907 gram

- FeCl<sub>3</sub> 1% sebanyak 5 ml

$$\frac{1}{100} \times 5 = 0,05 \text{ gram}$$

FeCl<sub>3</sub> yang dibutuhkan sebanyak 0,05 gram

- Larutan induk kuersetin

$$\text{Dik} = m = 10 \text{ mg}$$

$$V = 100 \text{ ml (0,1 L)}$$

$$\text{Dit} = C$$

Jawab :

$$C = \frac{m}{v} = \frac{10}{0,1} = 100 \text{ ppm}$$

### 2. Pengenceran larutan induk kuersetin 100 ppm ke 6, 8, 10, 12, dan 14 ppm

- **6 ppm**

$$\begin{aligned}M1.V1 &= M2.V2 \\V1 &= \frac{6 \text{ ppm} \times 10 \text{ ml}}{100 \text{ ppm}} \\&= 0,6 \text{ ml}\end{aligned}$$

Larutan induk kuersetin 100 ppm dipipet sebanyak 0,6 ml

- **8 ppm**

$$M1.V1 = M2.V2$$

$$V1 = \frac{8 \text{ ppm} \times 10 \text{ ml}}{100 \text{ ppm}} = 0,8 \text{ ml}$$

Larutan induk kuersetin 100 ppm dipipet sebanyak 0,8 ml

- **10 ppm**

$$M1.V1 = M2.V2$$

$$V1 = \frac{10 \text{ ppm} \times 10 \text{ ml}}{100 \text{ ppm}} = 1 \text{ ml}$$

Larutan induk kuersetin 100 ppm dipipet sebanyak 1 ml

- **12 ppm**

$$M1.V1 = M2.V2$$

$$V1 = \frac{12 \text{ ppm} \times 10 \text{ ml}}{100 \text{ ppm}} = 1,2 \text{ ml}$$

Larutan induk kuersetin 100 ppm dipipet sebanyak 1,2 ml

- **14 ppm**

$$M1.V1 = M2.V2$$

$$V1 = \frac{14 \text{ ppm} \times 10 \text{ ml}}{100 \text{ ppm}} = 1,4 \text{ ml}$$

Larutan induk kuersetin 100 ppm dipipet sebanyak 1,4 ml

### 3. Perhitungan rendemen ekstrak

Ekstrak 6 jam = 20,2 gram

Ekstrak 10 jam = 18,3 gram

- Rendemen ekstrak 6 jam

$$\% \text{ rendemen} = \frac{\text{berat ekstrak}}{\text{berat sampel}} \times 100$$

$$= \frac{20,2}{100} \times 100 = 20,2 \%$$

- Rendemen ekstrak 10 jam

$$\% \text{ rendemen} = \frac{\text{berat ekstrak}}{\text{berat sampel}} \times 100$$

$$= \frac{18,3}{100} \times 100 = 18,3 \%$$

### 4. Perhitungan kadar flavonoid

- **Sampel 6 jam**

Replikasi 1

absorbansi = 0,5559

y = 0,0428 x + 0,0248

0,5559 = 0,0428 x + 0,0248

$$0,0428 x = \frac{0,5559 - 0,0248}{0,0428}$$

$$x = 12,40$$

Replikasi 2

$$\text{absorbansi} = 0,5569$$

$$y = 0,0428 x + 0,0248$$

$$0,5569 = 0,0428 x + 0,0248$$

$$0,0428 x = \frac{0,5569 - 0,0248}{0,0428}$$

$$x = 12,43$$

Replikasi 3

$$\text{absorbansi} = 0,5561$$

$$y = 0,0428 x + 0,0248$$

$$0,5561 = 0,0428 x + 0,0248$$

$$0,0428 x = \frac{0,5561 - 0,0248}{0,0428}$$

$$x = 12,41$$

$$\text{rata-rata konsentrasi} = \frac{12,40 + 12,43 + 12,41}{3} = 12,41$$

$$\text{rata-rata absorbansi} = \frac{0,5559 + 0,5569 + 0,5561}{3} = 0,5563$$

$$\text{kadar flavonoid} = \frac{\text{konsentrasi sampel (ppm)}}{\text{konsentrasi sampel awal}} \times 100$$

$$= \frac{12,4 \text{ ppm}}{3000 \text{ ppm}} \times 100$$

$$= 0,4136 \text{ mg QE/gram}$$

- **Sampel 10 jam**

Replikasi 1

$$\text{absorbansi} = 0,6095$$

$$y = 0,0428 x + 0,0248$$

$$0,6095 = 0,0428 x + 0,0248$$

$$0,0428 x = \frac{0,6095 - 0,0248}{0,0428}$$

$$x = 13,66$$

Replikasi 2

$$\text{absorbansi} = 0,6095$$

$$y = 0,0428 x + 0,0248$$

$$0,6095 = 0,0428 x + 0,0248$$

$$0,0428 x = \frac{0,6095 - 0,0248}{0,0428}$$

$$x = 13,66$$

Replikasi 3

$$\text{absorbansi} = 0,6085$$

$$y = 0,0428 x + 0,0248$$

$$0,6085 = 0,0428 x + 0,0248$$

$$0,0428 x = \frac{0,6085 - 0,0248}{0,0428}$$

$$x = 13,63$$

$$\text{rata-rata konsentrasi} = \frac{13,66 + 13,66 + 13,63}{3} = 13,65$$

$$\text{rata-rata absorbansi} = \frac{0,6095 + 0,6095 + 0,6085}{3} = 0,6091$$

$$\text{kadar flavonoid} = \frac{\text{konsentrasi sampel (ppm)}}{\text{konsentrasi sampel awal}} \times 100$$

$$= \frac{13,65 \text{ ppm}}{3000 \text{ ppm}} \times 100$$

$$= 0,455 \text{ mg QE/gram}$$

Kandungan senyawa flavonoid pada sampel akan dihitung dalam satuan mg QE/gram sampel (Khoirunnisa et al., n.d.)