

LAMPIRAN

LAMPIRAN I

Perhitungan Kadar Total Fenol

1. Pembuatan Larutan Asam Galat 1000 ppm

$$= \frac{10 \text{ mg asam galat}}{10 \text{ mL metanol}} = \frac{10 \text{ mg}}{0,01 \text{ L}} = 1000 \text{ ppm}$$

2. Pembuatan Larutan Na_2CO_3 20%

20 gram Na_2CO_3 + 100 mL aquadest

3. Perhitungan larutan seri asam galat 20, 30, 50, 60, 70, 80, 90, 100 ppm

- a. 20 ppm

$$V_1 \cdot N_1 = V_2 \cdot N_2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 20$$

$$X = \frac{200}{1000}$$

$$X = 0,2 \text{ mL}$$

- b. 30 ppm

$$V_1 \cdot N_1 = V_2 \cdot N_2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 30$$

$$X = \frac{300}{1000}$$

$$X = 0,3 \text{ mL}$$

- c. 50 ppm

$$V_1 \cdot N_1 = V_2 \cdot N_2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 50$$

$$X = \frac{500}{1000}$$

$$X = 0,5 \text{ mL}$$

d. 60 ppm

$$V1 \cdot N1 = V2 \cdot N2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 60$$

$$X = \frac{600}{1000}$$

$$X = 0,6 \text{ mL}$$

e. 70 ppm

$$V1 \cdot N1 = V2 \cdot N2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 70$$

$$X = \frac{700}{1000}$$

$$X = 0,7 \text{ mL}$$

f. 80 ppm

$$V1 \cdot N1 = V2 \cdot N2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 80$$

$$X = \frac{800}{1000}$$

$$X = 0,8 \text{ mL}$$

g. 90 ppm

$$V1 \cdot N1 = V2 \cdot N2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 90$$

$$X = \frac{900}{1000}$$

$$X = 0,9 \text{ mL}$$

h. 100 ppm

$$V1 \cdot N1 = V2 \cdot N2$$

$$X \cdot 1000 = 10 \text{ mL} \cdot 100$$

$$X = \frac{1000}{1000}$$

$$X = 1 \text{ mL}$$

4. Pembuatan Larutan Induk Sampel 2000 ppm

$$= \frac{100 \text{ mg sampel}}{50 \text{ mL metanol}}$$

$$= \frac{100 \text{ mg}}{0,05 \text{ L}}$$

$$= 2000 \text{ ppm}$$

5. Perhitungan Kadar Total Fenol

No	Sampel	Replikasi	Absorbansi	Rata- rata
1.	Seduhan Teh	1	0,173	0,183
	Bawang Dayak	2	0,188	
		3	0,188	
2.	Seduhan Serbuk	1	0,362	0,360
	Bawang Dayak	2	0,358	
		3	0,361	
3.	Seduhan Kering	1	0,175	0,178
	Bawang Dayak	2	0,179	
		3	0,182	
4.	Maserasi Teh	1	0,159	0,159
	Bawang Dayak	2	0,159	
		3	0,160	

5.	Maserasi Serbuk	1	0,197	0,198
	Bawang Dayak	2	0,198	
		3	0,199	
6.	Maserasi Kering	1	0,162	0,163
	Bawang Dayak	2	0,163	
		3	0,164	

a. Perhitungan Kadar Total Fenol Ekstrak Seduhan Teh Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 500 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0.0097x + 0.0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi Awal}}$$

$$\begin{aligned} \text{Kadar Total Fenol} &= \frac{\left(\frac{0,173 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\ &= \frac{14,13 \times 10 \times 100\%}{2000} \\ &= \frac{14130}{2000} \\ &= 7,06\% \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 500 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi Awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,188 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{15,68 \times 10 \times 100\%}{2000} \\
 &= \frac{15680}{2000} \\
 &= 7,84 \%
 \end{aligned}$$

Replikasi 3

$$\text{Diketahui} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 500 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\begin{aligned}
 \text{Konsentrasi akhir} &= \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}} \\
 &= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}} \\
 &= 200 \text{ ppm}
 \end{aligned}$$

$$\begin{aligned}
 \text{Faktor Pengenceran} &= \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}} \\
 &= \frac{2000 \text{ ppm}}{200 \text{ ppm}} \\
 &= 10 \text{ ppm}
 \end{aligned}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi Awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,188 - 0,0359}{0,0097} \right) \times \text{FP} \times 100\%}{2000} \\
 &= \frac{15,68 \times 10 \times 100\%}{2000} \\
 &= \frac{15680}{2000} \\
 &= 7,84 \%
 \end{aligned}$$

b. Perhitungan Kadar Total Fenol Ekstrak Seduhan Serbuk Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0.0097x + 0.0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,362 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{33,61 \times 10 \times 100\%}{2000} \\
 &= \frac{33610}{2000} \\
 &= 16,80 \%
 \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 500 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,358 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{33,20 \times 10 \times 100\%}{2000} \\
 &= \frac{33200}{2000} \\
 &= 16,6\%
 \end{aligned}$$

Replikasi 3

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi liner} = y = 0,0097x + 0,359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\begin{aligned}
 \text{Konsentrasi akhir} &= \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Konsentrasi akhir}} \\
 &= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}} \\
 &= 200 \text{ ppm}
 \end{aligned}$$

$$\begin{aligned}
 \text{Faktor Pengenceran} &= \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}} \\
 &= \frac{2000 \text{ ppm}}{200 \text{ ppm}} \\
 &= 10 \text{ ppm}
 \end{aligned}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,361 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{3351 \times 10 \times 100\%}{2000} \\
 &= \frac{33510}{2000} \\
 &= 16,75 \%
 \end{aligned}$$

c. Perhitungan Kadar Total Fenol Ekstrak Seduhan Kering Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,175 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{14,34 \times 10 \times 100\%}{2000} \\
 &= \frac{14340}{2000} \\
 &= 7,17 \%
 \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,179 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{14,75 \times 10 \times 100\%}{2000} \\
 &= \frac{14750}{2000} \\
 &= 7,37 \%
 \end{aligned}$$

Replikasi 3

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\begin{aligned}
 \text{Konsentrasi akhir} &= \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}} \\
 &= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}} \\
 &= 200 \text{ ppm}
 \end{aligned}$$

$$\begin{aligned}
 \text{Faktor Pengenceran} &= \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}} \\
 &= \frac{2000 \text{ ppm}}{200 \text{ ppm}} \\
 &= 10 \text{ ppm}
 \end{aligned}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,182 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{15,06 \times 10 \times 100\%}{2000} \\
 &= \frac{15060}{2000} \\
 &= 7,53 \%
 \end{aligned}$$

d. Perhitungan Kadar Total Fenol Ekstrak Maserasi Teh Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,159 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{12,69 \times 10 \times 100\%}{2000} \\
 &= \frac{12690}{2000} \\
 &= 6,34 \%
 \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,159 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{12,69 \times 10 \times 100\%}{2000} \\
 &= \frac{12690}{2000} \\
 &= 6,34 \%
 \end{aligned}$$

Replikasi 3

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Konsentrasi akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,160 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{12,79 \times 10 \times 100\%}{2000} \\
 &= \frac{12790}{2000} \\
 &= 6,39 \%
 \end{aligned}$$

e. Perhitungan Kadar Total Fenol Ekstrak Maserasi Serbuk Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,197 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{16,60 \times 10 \times 100\%}{2000} \\
 &= \frac{16600}{2000} \\
 &= 8,3 \%
 \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,198 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{16,71 \times 10 \times 100\%}{2000} \\
 &= \frac{16170}{2000} \\
 &= 8,08 \%
 \end{aligned}$$

Replikasi 3

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,199 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{16,81 \times 10 \times 100\%}{2000} \\
 &= \frac{16810}{2000} \\
 &= 84,05 \%
 \end{aligned}$$

f. Perhitungan Kadar Total Fenol Ekstrak Maserasi Kering Bawang Dayak

Replikasi 1

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,162 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{13 \times 10 \times 100\%}{2000} \\
 &= \frac{13000}{2000} \\
 &= 6,5\%
 \end{aligned}$$

Replikasi 2

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Konsentrasi akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}
 \text{Kadar Total Fenol} &= \frac{\left(\frac{0,163 - 0,0359}{0,0097} \right) \times 10 \times 100\%}{2000} \\
 &= \frac{13,10 \times 10 \times 100\%}{2000} \\
 &= \frac{13100}{2000} \\
 &= 6,55 \%
 \end{aligned}$$

Replikasi 3

Diketahui :

$$\text{Konsentrasi awal} = 2000 \text{ ppm} / 2000 \mu \text{ g/mL}$$

$$\text{Volume yang diambil} = 0,5 \text{ mL} / 50 \mu \text{L}$$

$$\text{Volume akhir} = 5 \text{ mL} / 5000 \mu \text{L}$$

$$\text{Persamaan regresi linier} = y = 0,0097x + 0,0359$$

$$a = 0,0097$$

$$b = 0,0359$$

$$\text{Konsentrasi akhir} = \frac{\text{Konsentrasi awal} \times \text{Volume yang diambil}}{\text{Volume akhir}}$$

$$= \frac{2000 \text{ ppm} \times 0,5 \text{ mL}}{5 \text{ mL}}$$

$$= 200 \text{ ppm}$$

$$\text{Faktor Pengenceran} = \frac{\text{Konsentrasi Awal}}{\text{Konsentrasi Akhir}}$$

$$= \frac{2000 \text{ ppm}}{200 \text{ ppm}}$$

$$= 10 \text{ ppm}$$

$$\text{Kadar Total Fenol} = \frac{\left(\frac{\text{Absorbansi sampel} - b}{a} \right) \times \text{FP} \times 100\%}{\text{Konsentrasi awal}}$$

$$\begin{aligned}\text{Kadar Total Fenol} &= \frac{\left(\frac{0,164 - 0,0359}{0,0097}\right) \times 10 \times 100\%}{2000} \\ &= \frac{13,20 \times 10 \times 100\%}{2000} \\ &= \frac{13200}{2000} \\ &= 6,6 \%\end{aligned}$$

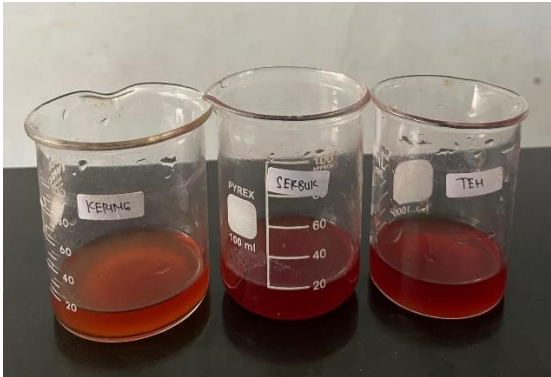
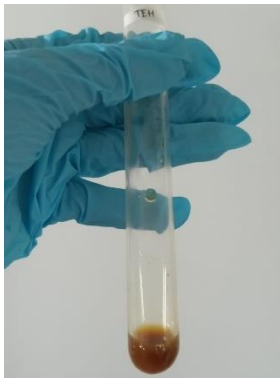
LAMPIRAN II

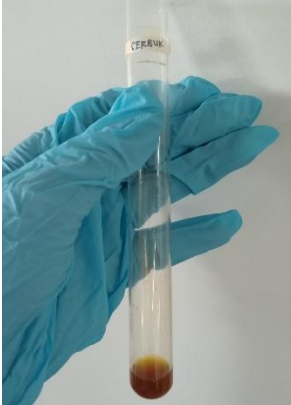
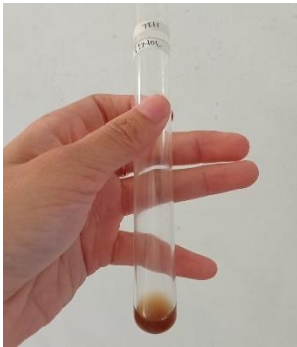
Gambar Hasil Penelitian

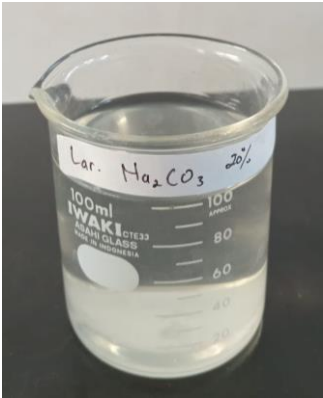
No	Gambar	Keterangan
1.		Produk teh bawang dayak
2.		Produk kering bawang dayak
3.		Produk serbuk bawang dayak

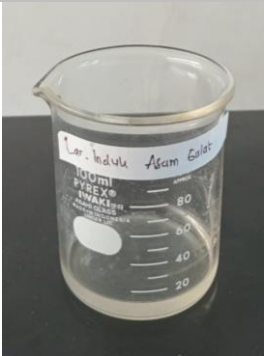
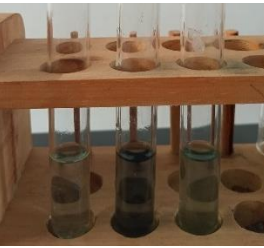
4.		Sampel teh bawang dayak
5.		Sampel kering bawang dayak
6.		Sampel serbuk bawang dayak
7.		Proses penimbangan sampel teh bawang dayak

8.		Proses penimbangan sampel kering bawang dayak
9.		Proses penimbangan sampel serbuk bawang dayak
10.		Proses maserasi sampel teh, kering, dan serbuk bawang dayak selama 1 hari

11.		Proses seduhan sampel teh, kering, dan serbuk bawang dayak selama 5 menit
12.		Penguapan ekstrak teh, kering, dan serbuk bawang dayak
13.		Uji bebas etanol pada ekstrak teh, kering, dan serbuk bawang dayak
14.		Uji senyawa fenolik ekstrak maserasi teh bawang dayak

15.		Uji senyawa fenolik ekstrak maserasi kering bawang dayak
16.		Uji senyawa fenolik ekstrak maserasi serbuk bawang dayak
17.		Uji senyawa fenolik ekstrak seduhan teh bawang dayak

18.		Uji senyawa fenolik ekstrak seduhan kering bawang dayak
19.		Uji senyawa fenolik ekstrak seduhan serbuk bawang dayak
20.		Larutan Na_2CO_3

21.		Larutan induk asam galat 1000 ppm
21.		Larutan seri asam galat
22.		Larutan seri ekstrak maserasi teh, kering, dan serbuk bawang dayak
23.		Larutan seri ekstrak seduhan teh, kering, dan serbuk bawang dayak

24.		Penentuan nilai absorbansi ekstrak teh, kering, dan serbuk bawang dayak pada panjang gelombang 745 nm.
-----	---	---



No : 032.06/FAR.PHB/VI/2025
Hal : Keterangan Praktek Laboratorium

SURAT KETERANGAN

Dengan ini menerangkan bahwa mahasiswa berikut :

Nama : Putri Afiatul Husna

NIM : 22080040

Judul Tugas Akhir : Pengaruh Kadar Fenol Dalam Produk Bawang Dayak (*Eleutherine palmifolia*) Dengan Teknik Analisis Folin-Ciocalteu

Benar – benar telah melakukan penelitian di Laboratorium Diploma III Farmasi Politeknik Harapan Bersama Tegal.

Demikian surat keterangan ini untuk digunakan sebagaimana mestinya.

Tegal, 3 Juni 2025

Ka. Program Studi Diploma III Farmasi

Politeknik Harapan Bersama

apt. Rizki Febriyanti, M.Farm.

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CURRICULUM VITAE



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DIII	: Politeknik Harapan Bersama Kota Tegal
Judul TA	: Penentuan Kadar Fenol dalam Produk Bawang Dayak (<i>Eleutherine palmifolia</i>) dengan Teknik Analisis <i>Folin-Ciocalteu</i> .
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Ibu	: Widiyawati
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Ibu	: Ibu Rumah Tangga
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