

### Lampiran 3:

#### Data Pengamatan

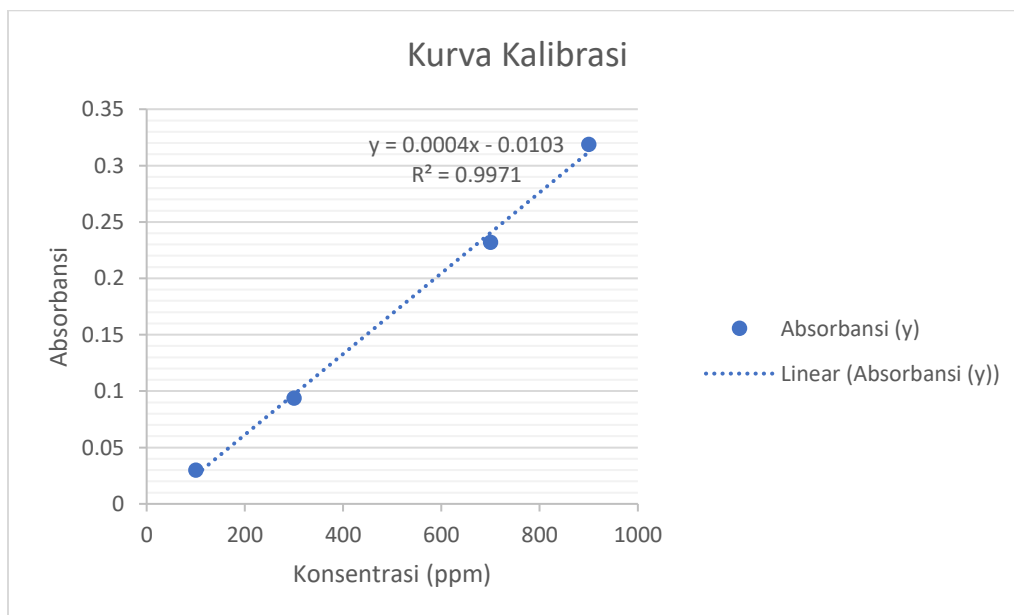
a. Data kalibrasi standar KHP,  $\lambda = 600 \text{ nm}$

No.	Konsentrasi (x) ppm	Absorbansi (y)
1	100	0.03
2	300	0.094
3	700	0.232
4	900	0.319

b. Data pengujian sampel

No.	Kode Sampel	Absorbansi	RPD
1	COD f.A	0.123 A	4%
2	COD f.B	0.128 A	
3	D. COD f.A	0.066 A	5%
4	D. COD f.B	0.070 A	

c. Kurva kalibrasi



## Perhitungan

### a. Perhitungan Regresi Linier

No.	Konsentrasi (x) ppm	Absorbansi (y)	x.y	x <sup>2</sup>
1	100	0.03	3	10000
2	300	0.094	28.2	90000
3	700	0.232	162.4	490000
4	900	0.319	287.1	810000
Σ	2000	0.675	480.7	1400000

$$b = \frac{n(\sum xy) - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

$$b = \frac{4(480,7) - (2000)(0,675)}{4(1400000) - 2000^2}$$

$$b = 0,0004$$

$$a = \frac{\sum y - b \sum x}{n}$$

$$a = \frac{0,675 - (0,0004)(2000)}{4}$$

$$a = -0,0103$$

### a. Perhitungan sampel

- Sampel COD f.A

$$Y = 0,0004X - 0,0103$$

$$0,123 + 0,0103 = 0,0004X$$

$$X = 333,25 \text{ mg/L}$$

- Sampel COD f.B

$$Y = 0,0004X - 0,0103$$

$$0,128 + 0,0103 = 0,0004X$$

$$X = 345,75 \text{ mg/L}$$

- Sampel D.COD f.A

$$Y = 0,0004X - 0,0103$$

$$0,066 + 0,0103 = 0,0004X$$

$$X = 190,75 \text{ mg/L}$$

- Sampel D.COD f.B

$$Y = 0,0004X - 0,0103$$

$$0,070 + 0,0103 = 0,0004X$$

$$X = 200,75 \text{ mg/L}$$

Jadi, konsentrasi rata-rata COD dalam sampel adalah sebagai berikut:

$$\begin{aligned} \text{konsentrasi COD feses} &= \frac{(333,25 + 345,75) \frac{\text{mg}}{\text{L}}}{2} \\ &= 339,5 \frac{\text{mg}}{\text{L}} \times 0,5 \frac{\text{L}}{\text{g}} \\ &= 169,75 \frac{\text{mg}}{\text{g}} \times 1000 \frac{\text{g}}{\text{kg}} = 169.750 \text{ mg/kg} \end{aligned}$$

$$\begin{aligned} \text{konsentrasi Dissolved COD feses} &= \frac{(190,75 + 200,75) \frac{\text{mg}}{\text{L}}}{2} \\ &= 195,75 \frac{\text{mg}}{\text{L}} \times 0,5 \frac{\text{L}}{\text{g}} \\ &= 97,875 \frac{\text{mg}}{\text{g}} \times 1000 \frac{\text{g}}{\text{kg}} \\ &= 97.875 \text{ mg/kg} \end{aligned}$$