

LAMPIRAN

Lampiran 1. Perhitungan pembuatan reagen

1. Larutan asam fosfat (H_3PO_4) 10% sebanyak 100 ml

Perhitungan pembuatan larutan H_3PO_4 10% dari larutan H_3PO_4 85%

Diketahui:

Volume (V_2) : 100 ml

Konsentrasi 1 (%1) : 85%

Konsentrasi 2 (%2) : 10%

Ditanya:

Volume 1 (V_1) = ...?

Penyelesaian:

$$V_1 \times \%1 = V_2 \times \%2$$

$$V_1 \times 85\% = 100 \text{ ml} \times 10\%$$

$$V_1 = \frac{1000}{85} = 12 \text{ ml}$$

2. Larutan asam sulfat (H_2SO_4) 60% sebanyak 100 ml

Perhitungan pembuatan larutan H_2SO_4 60% dari larutan H_2SO_4 98%

Diketahui:

Volume 2 (V_2) : 100 ml

Konsentrasi 1 (%1) : 98%

Konsentrasi 2 (%2) : 60%

Ditanya:

Volume (V_1) = ...?

Penyelesaian:

$$V_1 \times \%1 = V_2 \times \%2$$

$$V_1 \times 98\% = 100 \text{ ml} \times 60\%$$

$$V_1 = \frac{6000}{98} = 61,2 \text{ ml}$$

3. Larutan asam kromatofat 0,5%

Perhitungan asam kromatofat 0,5% (b/v) rumus:

$$\% \frac{b}{v} = \frac{g \text{ zat terlarut}}{ml \text{ larutan}} 100$$

$$0,5 = \frac{g \text{ zat terlarut}}{100ml} 100$$

$$g \text{ zat terlarut} = \frac{0,5 \times 100 \text{ ml}}{100}$$

$$= 0,5 \text{ gram}$$

Lampiran 2. Perhitungan larutan induk 100 ppm dari larutan stok formalin 37%

1. Larutan stok formalin 37%

$$\begin{aligned}\% &= \frac{\text{gram}}{\text{ml}} & \text{ppm} &= \frac{\text{mg}}{\text{liter}} \\ &= \frac{37}{100} \times 1.000.000 \text{ ppm} \\ &= 370.000 \text{ mg/L}\end{aligned}$$

2. Larutan 10.000 ppm (1%) dari 370.000 ppm dari larutan formalin 37%

Diketahui:

$$\text{Konsentrasi } (X1_{(\text{ppm})}) = 370.000 \text{ mg/L}$$

$$\text{Konsentrasi } (X2_{(\text{ppm})}) = 10.000 \text{ mg/L}$$

$$\text{Volume } (V2) = 100 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V1) \text{ Formalin} = \dots?$$

Penyelesaian:

$$V1 \times X1 = V2 \times X2$$

$$V1 \times 370.000 \text{ mg/L} = 100 \text{ mL} \times 10.000 \text{ mg/L}$$

$$V1 = \frac{100 \text{ mL} \times 10.000 \text{ mg/L}}{370.000 \text{ mg/L}} = 2,70 \text{ mL}$$

3. Larutan induk baku formalin 100 ppm dari larutan 10.000 ppm

Diketahui:

$$\text{Konsentrasi } (X1_{(\text{ppm})}) = 10.000 \text{ mg/L}$$

$$\text{Konsentrasi } (X2_{(\text{ppm})}) = 100 \text{ mg/L}$$

$$\text{Volume } (V2) = 100 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V1) \text{ Formalin} = \dots?$$

Penyelesaian:

$$V1 \times X1 = V2 \times X2$$

$$V1 \times 10.000 \text{ mg/L} = 100 \text{ mL} \times 100 \text{ mg/L}$$

$$V1 = \frac{100 \text{ mL} \times 100 \text{ mg/L}}{10.000 \text{ mg/L}} = 1 \text{ mL}$$

Lampiran 3. Perhitungan larutan seri standar formalin

1. Larutan standar 10 ppm dari larutan induk baku 100 ppm

Diketahui:

$$\text{Konsentrasi } (X1_{\text{(ppm)}}) = 100 \text{ mg/L}$$

$$\text{Konsentrasi } (X2_{\text{(ppm)}}) = 10 \text{ mg/L}$$

$$\text{Volume } (V2) = 50 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V1) \text{ Formalin} = \dots?$$

Penyelesaian:

$$V1 \times X1 = V2 \times X2$$

$$V1 \times 100 \text{ mg/L} = 50 \text{ mL} \times 10 \text{ mg/L}$$

$$V1 = \frac{50 \text{ mL} \times 10 \text{ mg/L}}{100 \text{ mg/L}} = 5 \text{ mL}$$

2. Larutan standar 8 ppm dari larutan induk baku 100 ppm

Diketahui:

$$\text{Konsentrasi } (X1_{\text{(ppm)}}) = 100 \text{ mg/L}$$

$$\text{Konsentrasi } (X2_{\text{(ppm)}}) = 8 \text{ mg/L}$$

$$\text{Volume } (V2) = 50 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V1) \text{ Formalin} = \dots?$$

Penyelesaian:

$$V1 \times X1 = V2 \times X2$$

$$V1 \times 100 \text{ mg/L} = 50 \text{ mL} \times 8 \text{ mg/L}$$

$$V1 = \frac{50 \text{ mL} \times 8 \text{ mg/L}}{100 \text{ mg/L}} = 4 \text{ mL}$$

3. Larutan standar 6 ppm dari larutan induk baku 100 ppm

Diketahui:

$$\text{Konsentrasi } (X1_{\text{(ppm)}}) = 100 \text{ mg/L}$$

$$\text{Konsentrasi } (X2_{\text{(ppm)}}) = 6 \text{ mg/L}$$

$$\text{Volume } (V2) = 50 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V1) \text{ Formlalin} = \dots?$$

Penyelesaian:

$$V_1 \times X_1 = V_2 \times X_2$$

$$V_1 \times 100 \text{ mg/L} = 50 \text{ mL} \times 6 \text{ mg/L}$$

$$V_1 = \frac{50 \text{ mL} \times 6 \text{ mg/L}}{100 \text{ mg/L}} = 3 \text{ mL}$$

4. Larutan standar 4 ppm dari larutan induk baku 100 ppm

Diketahui:

$$\text{Konsentrasi } (X_{1(\text{ppm})}) = 100 \text{ mg/L}$$

$$\text{Konsentrasi } (X_{2(\text{ppm})}) = 4 \text{ mg/L}$$

$$\text{Volume } (V_2) = 50 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V_1) \text{ Formalin} = \dots?$$

Penyelesaian:

$$V_1 \times X_1 = V_2 \times X_2$$

$$V_1 \times 100 \text{ mg/L} = 50 \text{ mL} \times 4 \text{ mg/L}$$

$$V_1 = \frac{50 \text{ mL} \times 4 \text{ mg/L}}{100 \text{ mg/L}} = 2 \text{ mL}$$

5. Larutan standar 2 ppm dari larutan induk baku 100 ppm

Diketahui:

$$\text{Konsentrasi } (X_{1(\text{ppm})}) = 100 \text{ mg/L}$$

$$\text{Konsentrasi } (X_{2(\text{ppm})}) = 2 \text{ mg/L}$$

$$\text{Volume } (V_2) = 50 \text{ mL}$$

Ditanyakan:

$$\text{Volume } (V_1) \text{ Formalin} = \dots?$$

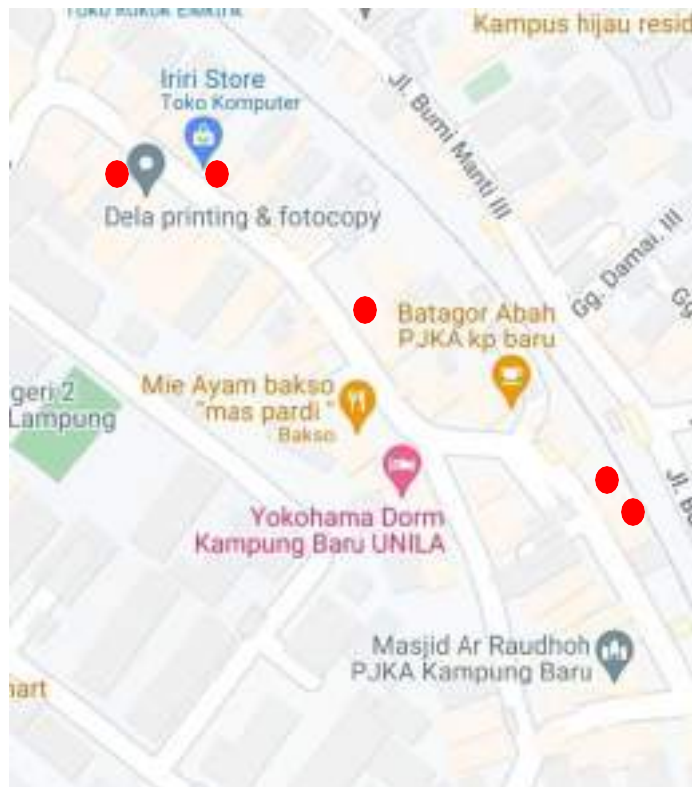
Penyelesaian:

$$V_1 \times X_1 = V_2 \times X_2$$

$$V_1 \times 100 \text{ mg/L} = 50 \text{ mL} \times 2 \text{ mg/L}$$

$$V_1 = \frac{50 \text{ mL} \times 2 \text{ mg/L}}{100 \text{ mg/L}} = 1 \text{ mL}$$

Lampiran 4. survei



● Lokasi sampling sampel

Lampiran 5. Hasil Penelitian

A. Sampel Sosis

No.	Kode Sampel	Gambar
1.	A	
2.	B	
3.	C	
4.	D	
5.	E	

No.	Kode Sampel	Gambar
6.	F	
7.	G	
8.	H	
9.	I	
10.	J	

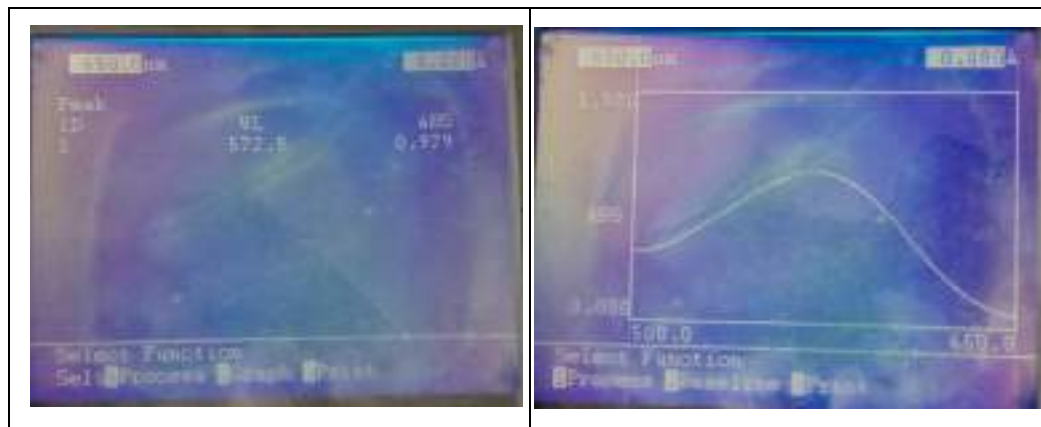
B. Pemeriksaan kualitatif formalin pengulangan 3 kali

No.	Gambar (Kode Sampel)		
	kontrol positif 		kontrol negatif 
1.	 A1x	 A2x	 A3x
2.	 B1x	 B2x	 B3x
3.	 C1x	 C2x	 C3x
4.	 D1x	 D2x	 D3x

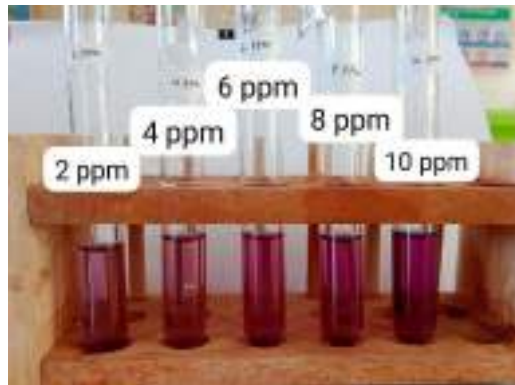
No	Gambar (Kode Sampel)		
5.			
	E1x	E2x	E3x
6.			
	F1x	F2x	F3x
7.			
	G1x	G2x	G3x
8.			
	H1x	H2x	H3x

No.	Gambar (kode sampel)		
9.	 I1x	 I2x	 I3x
10.	 J1x	 J2x	 J3x

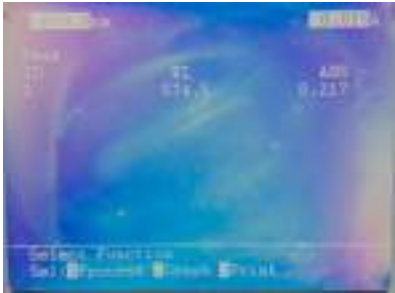
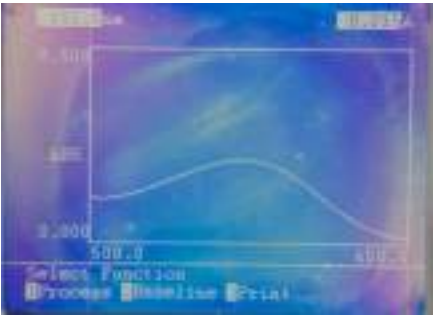
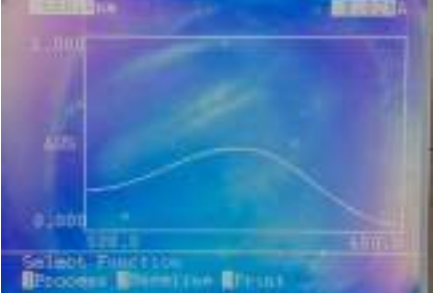
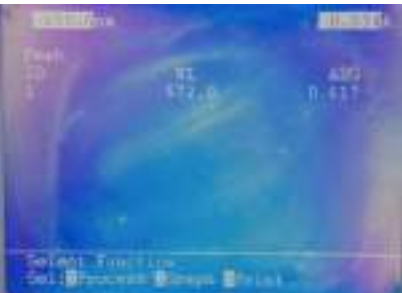
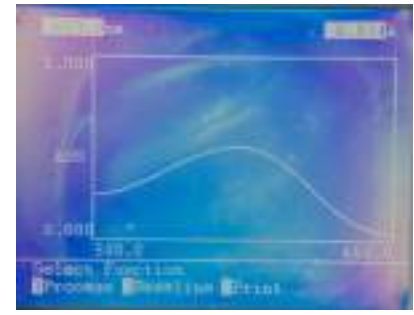
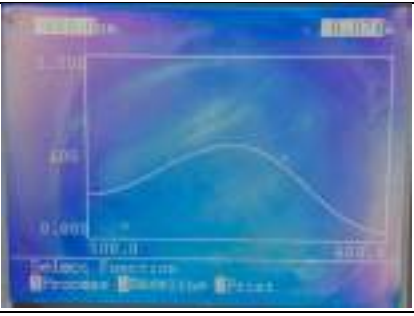
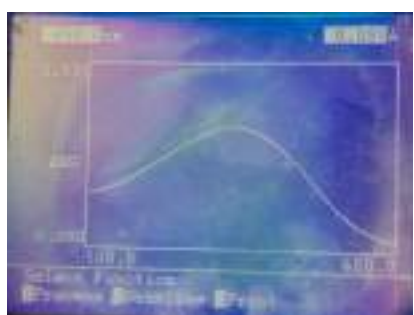
C. Panjang gelombang maksimum baku formalin 10 ppm



D. Absorbansi Larutan Seri Sandar Formalin



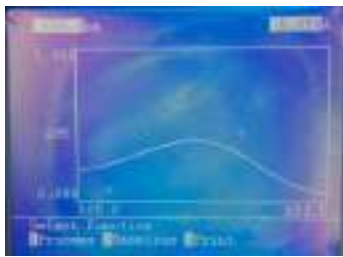
Konsentrasi (ppm)	Absorbansi	Gambar (absorbansi)
0	0,000	
2	0.208	
4	0.374	
6	0.604	
8	0.738	
10	0.977	

konsentrasi (ppm)	panjang gelombang	kurva panjang gelombang
2 ppm		
4 ppm		
6 ppm		
8 ppm		
10 ppm		

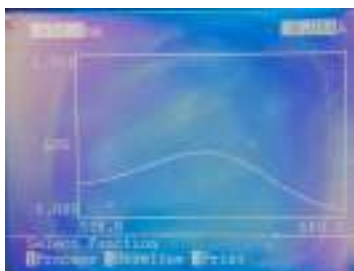
E. Larutan baku formalin 10 ppm + sampel negatif



F. Panjang Gelombang dan Absorbansi Baku Formalin 10 ppm + Sampel Negatif

panjang gelombang	kurva panjang gelombang	absorbansi
		

G. Panjang Gelombang dan Absorbansi Baku Formalin 10 ppm + Blanko

panjang gelombang	kurva panjang gelombang	absorbansi
		

H. Perhitungan konsentrasi baku formalin 10 ppm + sampel negatif

Rumus :

$$y = ax + b$$

Keterangan :

y = absorbansi baku formalin 10 ppm a = kemiringan

x = konsentrasi sampel b = slope

1. Kosentrasi baku formalin 10 ppm + sampel negatif

$$y = ax + b$$

Diketahui :

$$y = 0,399$$

$$a = 0,0958$$

$$b = 0,0046$$

Ditanya x : kosentrasi baku formalin 10 ppm + sampel negatif...?

Dijawab : $y = ax + b$

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

$$x = \frac{0,399-0,0046}{0,0958}$$

$$x = \frac{0,3944}{0,0958}$$

$$x = 4,116 \text{ ppm}$$

2. Kosentrasi baku formlain 10 ppm + blanko

Diketahui :

$$y = 0,475$$

$$a = 0,0958$$

$$b = 0,0046$$

Ditanya x : kosentrasi baku formalin 10 ppm + blanko...?

Dijawab : $y = ax + b$

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

$$x = \frac{0,475 - 0,0046}{0,0958}$$

$$x = \frac{0,4704}{0,0958}$$

$$x = 4,910 \text{ ppm}$$

3. Kosentrasi baku formalin 10 ppm

Diketahui :

$$y = 0,977$$

$$a = 0,0958$$

$$b = 0,0046$$

Ditanya x : kosentrasi baku formalin 10 ppm...?

Dijawab : $y = ax + b$

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

$$x = \frac{0,977 - 0,0046}{0,0958}$$

$$x = \frac{0,9724}{0,0958}$$

$$x = 10,150 \text{ ppm}$$

Lampiran 6. Dokumentasi Penelitian

	
Pengambilan sampel	Pembuatan reagen asam fosfat 10%
	
Pembuatan reagen asam sulfat 60%	Pembuatan reagen asam kromatofat
	
Pembuatan larutan baku 100 ppm	Menimbang sampel sosis sebanyak 100 gram
	
Menghaluskan sampel sosis	Sampel yang sudah dihaluskan ditambah 100 ml aquades dan 1 ml asam fosfat 10%



Mendestilasi sampel



Mereaksikan hasil destilasi, 1 ml sampel
+ 5 ml asam kromatofat



Memanaskan sampel diatas hotplate
selama 15 menit



Membandingkan dengan
kontrol (+) dan kontrol (-)



Membuat larutan seri standar formalin
2 ppm, 4 ppm, 6 ppm, 8 ppm, 10 ppm



Membaca larutan blanko dan seri
standar dengan spektrofotometer Uv-
Vis



Membuat larutan baku+sampel



Membaca larutan baku+sampel