LAMPIRAN

Lampiran 1 Data Perhitungan

A. Perhitungan Pembuatan Larutan HCl 2N dalam 100 ml aquadest

- **N HCl Pekat**

$= \frac{10 \text{ x massa jenis x } \%}{\text{BE}}$

$= \frac{10\ x\ 1{,}18\ g/ml\ x\ 37}{36{,}5\ g/molek}$

= 11,96 N

= 12 N

- **HCl 2N**

N_1 x V_1 = N_2 x V_2

12 x ml = 2 x 100 ml

ml $= \frac{200}{12}$

ml = 16,6

B. Perhitungan Pembuatan Larutan NaOH 1N dalam 100 ml aquadest

1 N NaOH $= \frac{\text{m}}{\text{Mr}}$ x $\frac{1000}{\text{V}}$ x a

$= \frac{\text{m}}{40 \text{ g/mol}}$ x $\frac{1000}{100}$ x 1

m NaOH $= \frac{40}{10}$

= 4 gram

C. Pembuatan Larutan BPW (*Buffered Peptone Water*) dalam 3000 ml aquadest

Diketahui pada etiket larutan BPW ialah 20,07 gram BPW dalam 1000 ml maka :

$= \frac{20{,}07\ g}{1000\ ml} = \frac{m}{3000\ ml}$

= m $= \frac{60.210\ gml}{1000\ ml}$

= m = 60,21 gram

D. Pembuatan Media PCA (*Plate Count Agar*) dalam 1500 ml aquadest

Diketahui pada etiket media PCA ialah 17,5 gram PCA dalam 1500 ml maka :

$= \frac{17{,}5\ g}{1000\ ml} = \frac{m}{1500\ ml}$

$= \text{m} = \frac{26.250\ gml}{1000\ ml}$

$= \text{m} = 26{,}25$ gram

E. Perhitungan Nilai ALT Pada Pati Pisang Kepok Setelah Penyinaran Sinar UV

- **Replikasi 1**

$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$

$N = \frac{78+72+29+24}{1\ X\ [2+(0{,}1\ x\ 2\ )]X\ 10^{-5}}$

$N = \frac{203}{2{,}2\ X\ 10^{-5}}$

$N = 9{,}2 \times 10^{6}$ CFU/g

- **Replikasi 2**

$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$

$N = \frac{71+70+20+20}{1\ X\ [2+(0{,}1\ x\ 2\ )]X\ 10^{-5}}$

$N = \frac{181}{2{,}2\ X\ 10^{-5}}$

$N = 8{,}2 \times 10^{6}$ CFU/g

- **Replikasi 3**

$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$

$N = \frac{72+70+19+17}{1\ X\ [2+(0{,}1\ x\ 2\ )]X\ 10^{-5}}$

$N = \frac{178}{2{,}2\ X\ 10^{-5}}$

$N = 8{,}1 \times 10^{6}$ CFU/g

F. Perhitungan Nilai ALT Pada Pati Pisang Kepok Tanpa Penyinaran Sinar UV

- **Replikasi 1**

$$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$$

$$N = \frac{195+129+10+12}{1\ X\ [2+(0{,}1\ x\ 2\ )]X\ 10^{-6}}$$

$$N = \frac{346}{2{,}2\ X\ 10^{-6}}$$

$N = 1{,}6 \times 10^{8}$ CFU/g

- **Replikasi 2**

$$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$$

$$N = \frac{93+90}{1\ X\ [2+(0{,}1\ x\ 0\ )]X\ 10^{-6}}$$

$$N = \frac{183}{2\ X\ 10^{-6}}$$

$N = 9{,}2 \times 10^{7}$ CFU/g

- **Replikasi 3**

$$N = \frac{\sum C}{V\ X\ [n1+(0{,}1\ x\ n2\ )]X\ d}$$

$$N = \frac{85+85}{1\ X\ [2+(0{,}1\ x\ 0\ )]X\ 10^{-6}}$$

$$N = \frac{170}{2\ X\ 10^{-6}}$$

$N = 8{,}5 \times 10^{7}$ CFU/g

Lampiran 2 Data Pengamatan

A. Data Jumlah Koloni dan Nilai ALT Pada Tiap Sampel Dan Blanko

Sampel	Pengenceran	Jumlah Koloni						Nilai ALT (CFU/g)		
		Replikasi 1		Replikasi 2		Replikasi 3		Replikasi 1	Replikasi 2	Replikasi 3
		A	B	A	B	A	B			
Pati pisang kepok steril	10^{-5}	78	72	71	70	72	70	$9{,}2 \times 10^{6}$	$8{,}2 \times 10^{6}$	$8{,}1 \times 10^{6}$
	10^{-6}	29	24	20	20	19	17			
	10^{-7}	14	14	14	13	14	11			
	10^{-8}	10	9	10	9	7	7			
	10^{-9}	5	7	3	3	2	2			
	10^{-10}	2	2	0	1	0	1			
	10^{-11}	1	1	0	0	0	0			
Pati pisang kepok non steril	10^{-5}	220	201	181	173	184	182	$1{,}6 \times 10^{8}$	$9{,}2 \times 10^{7}$	$8{,}5 \times 10^{7}$
	10^{-6}	195	129	93	90	85	85			
	10^{-7}	10	12	8	6	4	5			
	10^{-8}	3	4	3	2	3	3			
	10^{-9}	2	3	2	1	1	0			
	10^{-10}	70	81	55	50	49	41			
	10^{-11}	41	40	22	30	22	16			
Blanko (Media + Larutan BPW)		63		5		13		-		
Blanko (Media)		0		0		-		-		

Lampiran 3 Dokumentasi

A. Sterilisasi Pati Pisang Kepok

		
Penimbangan pati pisang kepok sebanyak 200 gram atau hingga jarak ketebalan pati sebesar 0,5 cm	**Dimasukkan pati pisang ke dalam UV Box**	**Dinyalakan sinar UV selama 2 jam**

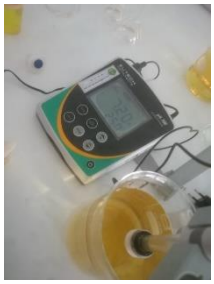
B. Pembuatan Larutan NaOH

	
Penimbangan NaOH	**Pelarutan NaOH dengan Aquadest**

C. Pembuatan Larutan HCl 2N

	
Pengenceran HCl Pekat menjadi HCl 2N	**Dipindahkan HCl 2N ke dalam beaker glass**

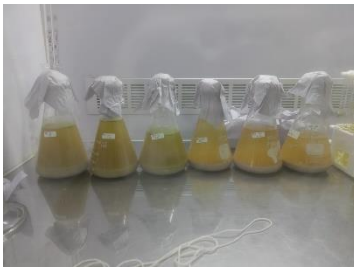
D. Pembuatan Larutan BPW (*Buffered Peptone Water*)

		
Penimbangan BPW	**Pelarutan larutan BPW diatas *Hotpltae***	**Pengaturan pH hingga 7,2 dengan larutan HCl**

E. Pembuatan Media PCA (*Plate Count Agar*)

		
Penimbangan media PCA	**Pelarutan media PCA diatas *Hotplate***	**Pengaturan suhu hingga sekitar 44°C-47°C**

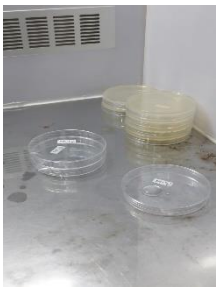
F. Pembuatan Suspensi Sampel

		
Penimbangan sampel	**Penambahan 225 ml larutan BPW kemudian dilakukan pengadukan**	**Sampel setelah dibiarkan selama 10 menit**

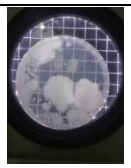
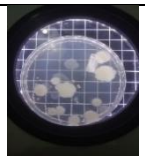
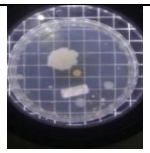
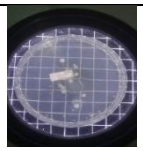
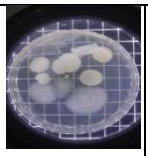
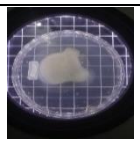
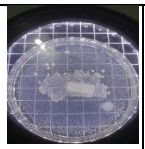
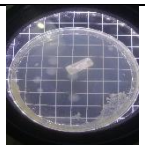
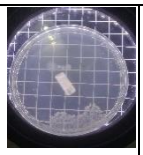
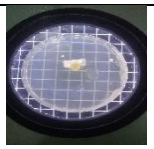
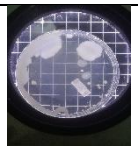
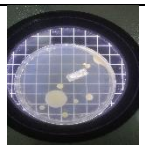
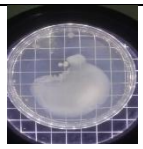
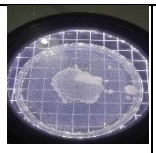
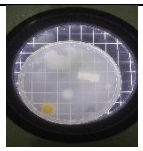
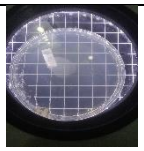
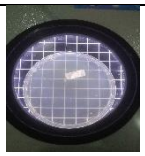
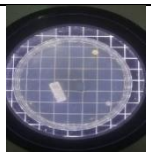
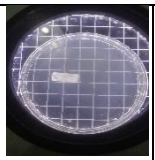
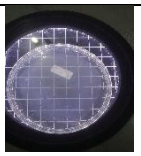
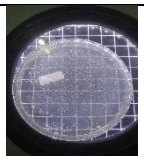
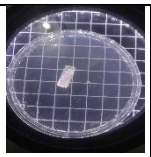
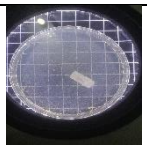
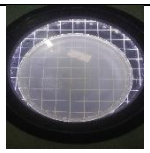
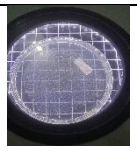
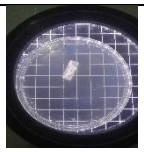
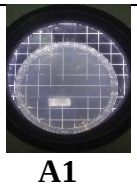
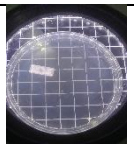
G. Pengenceran Sampel

		
Tabung reaksi yang telah diisi 9 ml larutan BPW	**Pengambilan 1 ml dari pengenceran 10^{-1}**	**Dimasukkan 1 ml pengenceran 10^{-1} ke dalam tabung reaksi (10^{-2}). Dilakukan hingga pengenceran 10^{-11}**

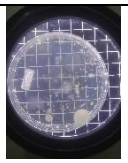
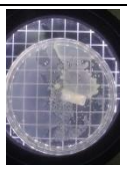
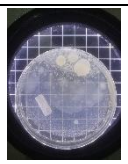
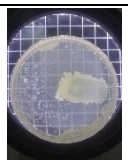
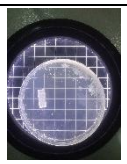
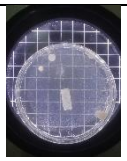
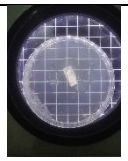
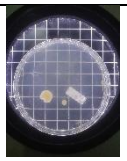
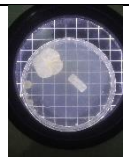
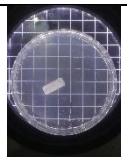
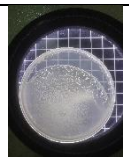
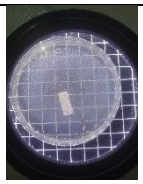
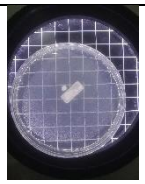
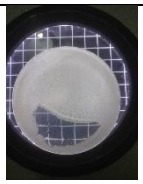
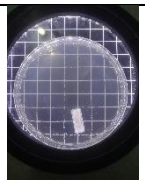
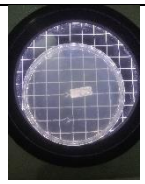
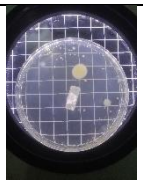
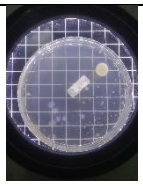
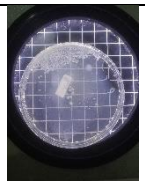
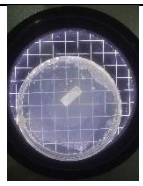
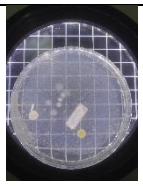
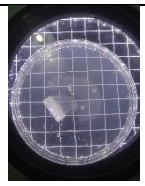
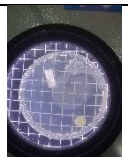
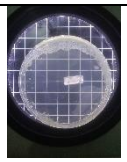
H. Pengujian ALT (Angka Lempeng Total) Teknik Cawan Tuang

		
Pemipetan 1 ml pengenceran 10^{-5} - 10^{-11}	**Hasil inkulasi sampel ke dalam cawan petri**	**Penuangan media PCA dengan teknik cawan tuang**
		
Inkubasi dalam posisi terbalik pada suhu 30°C ± 1 °C selama 72 ± 3 jam	**Pengamatan dan perhitungan jumlah koloni yang tumbuh**	

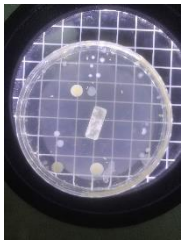
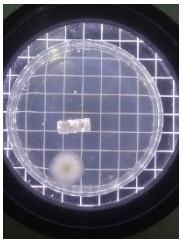
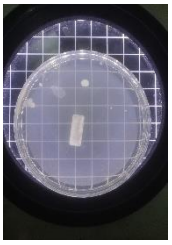
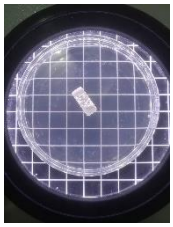
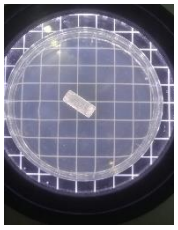
I. Pengamatan Koloni Pada Pati Pisang Kepok Setelah Penyinaran Sinar UV

					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-5}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-6}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-7}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-8}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-9}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-10}					
					
A1	**B1**	**A2**	**B2**	**A3**	**B3**
10^{-11}					

J. Pengamatan Koloni Pada Pati Pisang Kepok Tanpa Penyinaran Sinar UV

 A1	 B1	 A2	 B2	 A3	 B3
10^{-5}					
 A1	 B1	 A2	 B2	 A3	 B3
10^{-6}					
 A1	 B1	 A2	 B2	 A3	 B3
10^{-7}					
 A1	 B1	 A2	 B2	 A3	 B3
10^{-8}					
 A1	 B1	 A2	 B2	 A3	 B3
10^{-9}					
 A1	 B1	 A2	 B2	 A3	 B3
10^{-10}					
 A1	 B1	 A2	 B2	A3	B3
10^{-11}					

K. Hasil Pengamatan Koloni Pada Blanko

		
A	**B**	**C**
Blanko (BPW + Media)		
		-
A	**B**	**C**
Blanko (Media)		