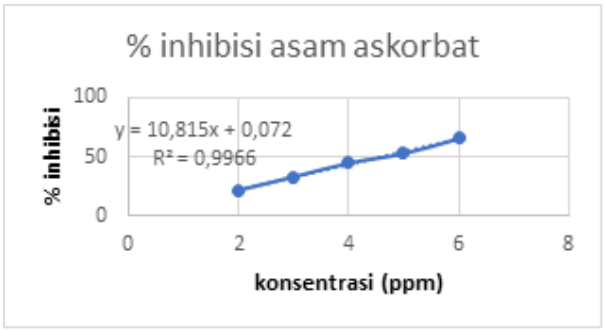
LAMPIRAN

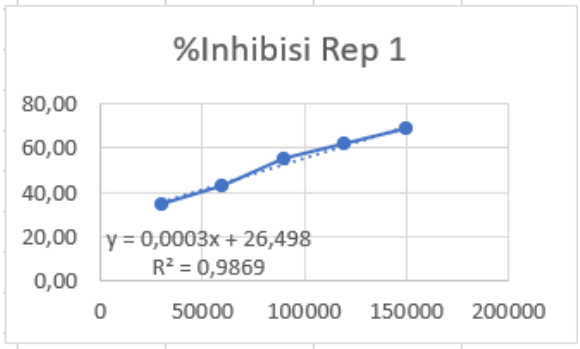
Lampiran 1: Kurva Hubungan %Inhibisi terhadap Konsentrasu Sampel Biji Pepaya Gunung

i. Kurva %Inhibisi Asam Askorbat

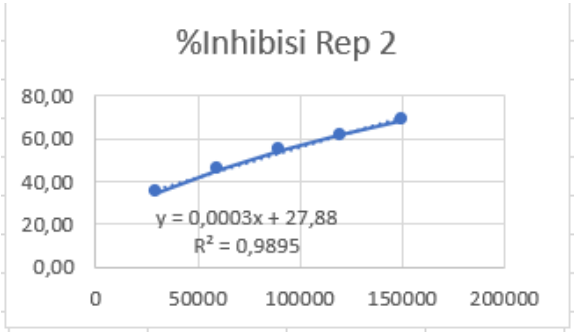


ii. %Inhibisi N-Heksan 120 Menit

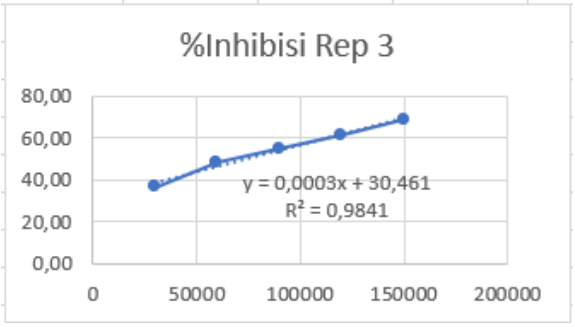
- **Replikasi 1**



- **Replikasi 2**

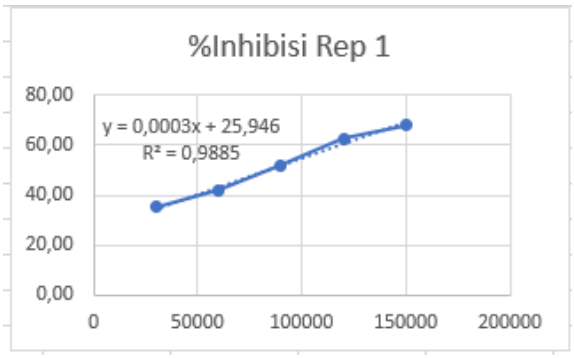


- **Replikasi 3**

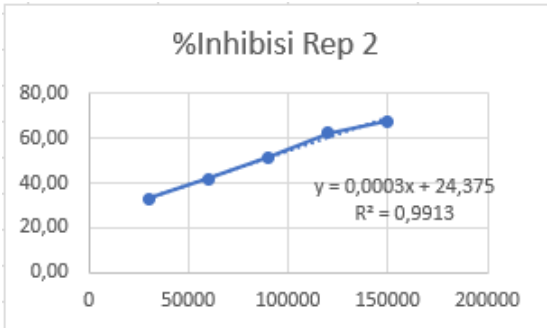


iii. %Inhibisi N-Heksan 150 Menit

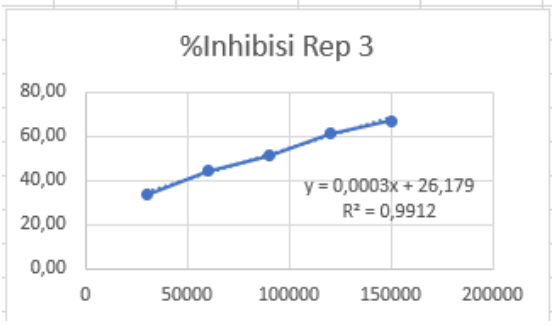
- **Replikasi 1**



- **Replikasi 2**

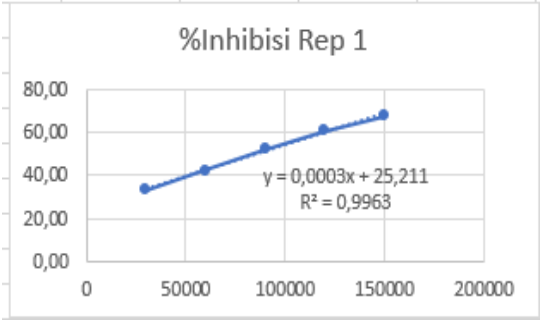


- **Replikasi 3**

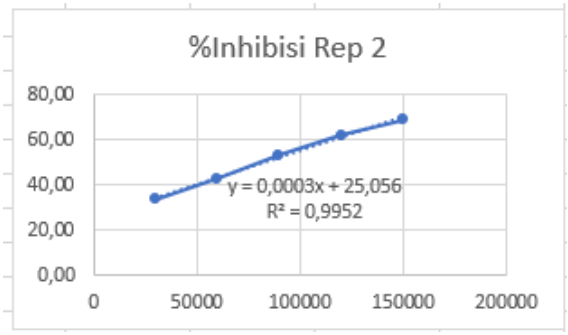


iv. %Inhibisi N-Heksan 180 Menit

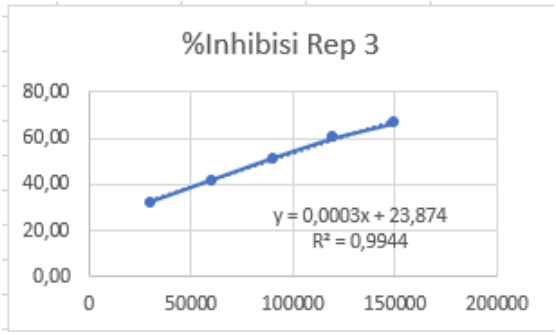
- **Replikasi 1**



- **Replikasi 2**



- **Replikasi 3**



Lampiran 2: Perhitungan Rendemen Ekstak

$$\%\text{Rendemen} = \frac{(Bobot\ cawan\ kosong + ekstrak) - Bobot\ cawan\ kosong}{Bobot\ simplisia} x100\%$$

1. Rendemen Ekstrak Waktu 120 Menit

- Replikasi 1

$$\%\text{Rendemen} = \frac{135{,}1767 - 130{,}7598}{15{,}0063} x100\%$$

$$= 29{,}43\ \%$$

- Replikasi 2

$$\%\text{Rendemen} = \frac{31{,}8932 - 27{,}9308}{15{,}0025} x100\%$$

$$= 26{,}41\ \%$$

- Replikasi 3

$$\%\text{Rendemen} = \frac{141{,}9415 - 137{,}5551}{15{,}0031} x100\%$$

$$= 29{,}24\%$$

- Rata – rata $= \frac{rep\ 1 + rep\ 2 + rep\ 3}{3}$

$$= 28{,}36\ \%$$

2. Rendemen Ekstrak Waktu 150 Menit

- Replikasi 1

  %Rendemen = $\frac{109,5780-105,0144}{15,0021} x100\%$

  = 30,42%

- Replikasi 2

  %Rendemen = $\frac{35,0041-31,0724}{15,0037} x100\%$

  = 26,20%

- Replikasi 3

  %Rendemen = $\frac{135,9418-132,1421}{15,0021} x100\%$

  = 25,33%

- Rata – Rata = 27,32%

3. Rendemen Ekstak Waktu 180 Menit

- Replikasi 1

  %Rendemen = $\frac{33,6493-28,9964}{15,0047} x100\%$

  = 31%

- Replikasi 2

  %Rendemen = $\frac{39,4633-34,7359}{15,0010} x100\%$

  = 31,51%

- Replikasi 3

  %Rendemen = $\frac{139,3298-134,8921}{15,0017} x100\%$

  = 29,58%

- Rata – Rata = 30,69%

Lampiran 3: Perhitungan Pengenceran Larutan Uji

Rumus : M1 x V1 = M2 x V2

150000 ppm × V1 = 120000 ppm × 10 ml

V1 = 8 ml

120000 ppm × V1 = 90000 ppm × 10 ml

V1 = 7,5 ml

90000 ppm × V1 = 60000 ppm × 10 ml

V1 = 6,67 ml

60000 ppm × V1 = 30000 ppm × 10 ml

V1 = 5 ml

Lampiran 4: Perhitungan % Inhibisi

$$\%\text{Inhibisi} = \frac{absorbansi\ blanko - absorbansi\ sampel}{absorbansi\ blanko} \times 100\%$$

A. 120 Menit

1. 30000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,651-0,426}{0,651} \times 100\%$

= 34,56 %

- **Replikasi 2**

% Inhibisi = $\frac{0,651-0,425}{0,651} \times 100\%$

= 34,72 %

- **Replikasi 3**

% Inhibisi = $\frac{0,651-0,415}{0,651} \times 100\%$

= 36,25 %

2. 60000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,651-0,371}{0,651} \times 100\%$

= 43,01 %

- **Replikasi 2**

% Inhibisi = $\frac{0,651-0,354}{0,651} \times 100\%$

= 45,62 %

- **Replikasi 3**

- **% Inhibisi =** $\frac{0,651-0,338}{0,651} \times 100\%$

= 48,08 %

3. **90000 ppm**

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}291}{0{,}651} \times 100\%$$

$$= 55{,}30\ \%$$

- **Replikasi 2**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}295}{0{,}651} \times 100\%$$

$$= 54{,}69\ \%$$

- **Replikasi 3**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}296}{0{,}651} \times 100\%$$

$$= 54{,}53\ \%$$

4. **120000 ppm**

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}248}{0{,}651} \times 100\%$$

$$= 61{,}90\ \%$$

- **Replikasi 2**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}249}{0{,}651} \times 100\%$$

$$= 61{,}75\ \%$$

- **Replikasi 3**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}253}{0{,}651} \times 100\%$$

$$= 61{,}14\ \%$$

5. **150000 ppm**

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}203}{0{,}651} \times 100\%$$

$$= 68{,}82\ \%$$

- **Replikasi 2**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}204}{0{,}651} \times 100\%$$

$$= 68{,}66\ \%$$

- **Replikasi 3**

$$\textbf{\% Inhibisi} = \frac{0{,}651-0{,}206}{0{,}651} \times 100\%$$

$$= 68{,}43\ \%$$

B. 150 Menit

1. 30000 ppm

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}424}{0{,}653} \times 100\%$$

$$= 35{,}04\ \%$$

- **Replikasi 2**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}437}{0{,}653} \times 100\%$$

$$= 33{,}04\ \%$$

- **Replikasi 3**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}435}{0{,}653} \times 100\%$$

$$= 33{,}42\ \%$$

2. 60000 ppm

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}379}{0{,}653} \times 100\%$$

$$= 41{,}92\ \%$$

- **Replikasi 2**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}379}{0{,}653} \times 100\%$$

$$= 41{,}96\ \%$$

- **Replikasi 3**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}363}{0{,}653} \times 100\%$$

$$= 44{,}38\ \%$$

3. 90000 ppm

- **Replikasi 1**

$$\textbf{\% Inhibisi} = \frac{0{,}653-0{,}314}{0{,}653} \times 100\%$$

$$= 51{,}99\ \%$$

- **Replikasi 2**

% Inhibisi = $\frac{0,653-0,316}{0,653} \times 100\%$

= 51,68 %

- **Replikasi 3**

% Inhibisi = $\frac{0,653-0,318}{0,653} \times 100\%$

= 51,30 %

4. 120000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,653-0,243}{0,653} \times 100\%$

= 62,80 %

- **Replikasi 2**

% Inhibisi = $\frac{0,653-0,245}{0,653} \times 100\%$

= 62,45 %

- **Replikasi 3**

% Inhibisi = $\frac{0,653-0,253}{0,653} \times 100\%$

= 61,25 %

5. 150000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,653-0,210}{0,653} \times 100\%$

= 67,91 %

- **Replikasi 2**

% Inhibisi = $\frac{0,653-0,210}{0,653} \times 100\%$

= 67,82 %

- **Replikasi 3**

% Inhibisi = $\frac{0,653-0,214}{0,653} \times 100\%$

= 67,21 %

C. 180 Menit

1. 30000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,655-0,436}{0,655} \times 100\%$

= 33,43 %

- **Replikasi 2**

% Inhibisi = $\frac{0,655-0,435}{0,655} \times 100\%$

= 33,60 %

- **Replikasi 3**

% Inhibisi = $\frac{0,655-0,446}{0,655} \times 100\%$

= 31,93 %

2. 60000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,655-0,378}{0,655} \times 100\%$

= 42,38 %

- **Replikasi 2**

% Inhibisi = $\frac{0,655-0,377}{0,655} \times 100\%$

= 42,53 %

- **Replikasi 3**

% Inhibisi = $\frac{0,655-0,383}{0,655} \times 100\%$

= 41,52 %

3. 90000 ppm

- **Replikasi 1**

% Inhibisi = $\frac{0,655-0,313}{0,655} \times 100\%$

= 52,22 %

- **Replikasi 2**

% Inhibisi = $\frac{0,655-0,308}{0,655} \times 100\%$

= 53,01 %

- **Replikasi 3**

% Inhibisi = $\frac{0,655-0,320}{0,655} \times 100\%$

= 51,20 %

4. **120000 ppm**

- **Replikasi 1**

$$\% \text{ Inhibisi} = \frac{0,655-0,257}{0,655} \times 100\%$$

= 60,85 %

- **Replikasi 2**

$$\% \text{ Inhibisi} = \frac{0,655-0,249}{0,655} \times 100\%$$

= 61,94 %

- **Replikasi 3**

$$\% \text{ Inhibisi} = \frac{0,655-0,260}{0,655} \times 100\%$$

= 60,27 %

5. **150000 ppm**

- **Replikasi 1**

$$\% \text{ Inhibisi} = \frac{0,655-0,212}{0,655} \times 100\%$$

= 67,70 %

- **Replikasi 2**

$$\% \text{ Inhibisi} = \frac{0,655-0,205}{0,655} \times 100\%$$

= 68,74 %

- **Replikasi 3**

$$\% \text{ Inhibisi} = \frac{0,655-0,219}{0,655} \times 100\%$$

= 66,62 %

= 19,69%

- Rata – Rata = 19,83%

1. **60000 ppm**

- **Replikasi 1**

$$\%\text{Inhibisi} = \frac{0,726-0,550}{0,726} \times 100\%$$

= 24,24%

- **Replikasi 2**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}566}{0{,}726} \times 100\%$$

$$= 22{,}04\%$$

- **Replikasi 3**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}569}{0{,}726} \times 100\%$$

$$= 21{,}63\%$$

- **Rata – Rata** = 22,63%

2. 90000 ppm

- **Replikasi 1**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}528}{0{,}726} \times 100\%$$

$$= 27{,}27\%$$

- **Replikasi 2**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}529}{0{,}726} \times 100\%$$

$$= 27{,}14\%$$

- **Replikasi 3**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}530}{0{,}726} \times 100\%$$

$$= 27{,}00\%$$

- **Rata – Rata** = 27,13%

3. 120000 ppm

- **Replikasi 1**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}497}{0{,}726} \times 100\%$$

$$= 31{,}54\%$$

- **Replikasi 2**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}509}{0{,}726} \times 100\%$$

$$= 29{,}89\%$$

- **Replikasi 3**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}510}{0{,}726} \times 100\%$$

$$= 29{,}75\%$$

- **Rata – Rata** = 30,39%

4. **150000 ppm**

- **Replikasi 1**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}454}{0{,}726} \times 100\%$$

$$= 37{,}47\%$$

- **Replikasi 2**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}470}{0{,}726} \times 100\%$$

$$= 35{,}26\%$$

- **Replikasi 3**

$$\%\text{Inhibisi} = \frac{0{,}726 - 0{,}488}{0{,}726} \times 100\%$$

$$= 32{,}78\%$$

- **Rata – Rata** = 35,17%

Lampiran 5: Perhitungan IC50

Rumus IC_{50} : $y = ax + b$

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

Kontrol Positif

y = 10,815x + 0,072

50 = 10,815x + 0,072

x = 4,6166

1. **120 Menit**

- **Replikasi 1**

y = 0,0003x + 26,498

50 = 0,0003x + 26,498

$x = \frac{50 - 26{,}498}{0{,}0003}$

x = 78,340

- **Replikasi 2**

y = 0,0003x + 27,88

50 = 0,0003x + 27,88

$x = \frac{50-27,88}{0,0003}$

$x = 73.733,3333$

- **Replikasi 3**

  $y = 0,0003x + 30,461$

  $50 = 0,0003x + 30,461$

  $x = \frac{50-30,461}{0,0003}$

  $x = 65,130$

- **Rata – Rata** = 72.401,1111

2. 150 Menit

- **Replikasi 1**

  $y = 0,0003x + 25,95$

  $50 = 0,0003x + 25,95$

  $x = \frac{50-25,95}{0,0003}$

  $x = 80.166,6666$

- **Replikasi 2**

  $y = 0,0003x + 24,38$

  $50 = 0,0003x + 24,38$

  $x = \frac{50-24,38}{0,0003}$

  $x = 85,400$

- **Replikasi 3**

  $y = 0,0003x + 26,18$

  $50 = 0,0003x + 26,18$

  $x = \frac{50-26,18}{0,0003}$

  $x = 79,400$

- **Rata – Rata** = 81.655,5555

3. 180 Menit

- **Replikasi 1**

  $y = 0,0003x + 25,21$

  $50 = 0,0003x + 25,21$

  $x = \frac{50-25,21}{0,0003}$

x = 82.633,3333

- **Replikasi 2**

  y = 0,0003x + 25,056

  50 = 0,0003x + 25,056

  $x = \frac{50-25,056}{0,0003}$

  x = 83.146,6666

- **Replikasi 3**

  y = 0,0003x + 23,874

  50 = 0,0003x + 23,874

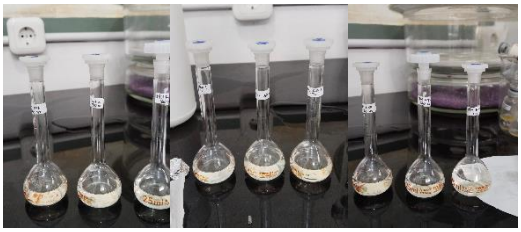
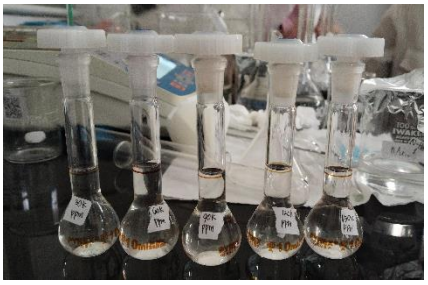
  $x = \frac{50-23,874}{0,0003}$

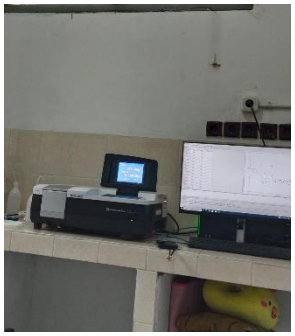
  x = 87.086,6666

- **Rata – Rata** = 84.288,8888

Lampiran 6: Dokumentasi

 Penimbangan simplisia biji pepaya gunung sebelum dioven	 Proses pengovenan simplisia biji pepaya gunung
 Proses penyerbukan biji pepaya	 Proses ekstraksi panas (refluks)

 Pengovenan cawan porselin selama 60 menit	 Proses rotary evaporator
 Proses waterbath untuk pengentalan filtrat	 Penimbangan ekstrak hingga bobot tetap
 Penimbangan ekstrak untuk larutan induk sampel	 Pembuatan larutan induk sampel
 Pembuatan larutan seri sampel	 Pembuatan DPPH 50 ppm

	
Proses inkubasi sampel dengan larutan DPPH	Pengujian Aktivitas Antioksidan dengan Spektrofotometer UV-Vis