

LAMPIRAN

Lampiran 1. Perhitungan %Rendemen

Bobot Ekstrak = 3,5 g

$$\begin{aligned}\% \text{Rendemen} &= \frac{3,5 \text{ g}}{200 \text{ g}} \times 100\% \\ &= 1,75\%\end{aligned}$$

Lampiran 2. Dokumentasi Kegiatan

A. Preparasi Sampel Batang Sagu (*Metroxylon sagu* Rottb.)

Pengambilan sampel batang sagu (<i>Metroxylon sagu</i> Rottb.)	
Perajangan sampel batang sagu (<i>Metroxylon sagu</i> Rottb.)	

	
Pengeringan sampel batang sagu (<i>Metroxylon sagu</i> Rottb.)	
Pembuatan serbuk simplisia sampel batang sagu (<i>Metroxylon sagu</i> Rottb.)	



B. Ekstraksi Sampel Batang Sagu (*Metroxylon sagu* Rottb.)

Ekstraksi sampel batang sagu (<i>Metroxylon sagu</i> Rottb.) dengan metode maserasi	
Penyaringan sampel batang sagu (<i>Metroxylon sagu</i> Rottb.) Dengan alat vakum	

Pembuatan ekstrak kental batang sagu (*Metroxylon sagu* Rottb.) menggunakan alat rotary evaporator



Pengeringan ekstrak kental batang sagu (*Metroxylon sagu* Rottb.)



Bobot ekstrak kental batang sagu (*Metroxylon sagu* Rottb.)



Lampiran 3. Skrining Fitokimia Ekstrak Etanol Batang Sagu (*Metroxylon sagu* Rottb.)

Uji Alkaloid

a. Pereaksi Mayer



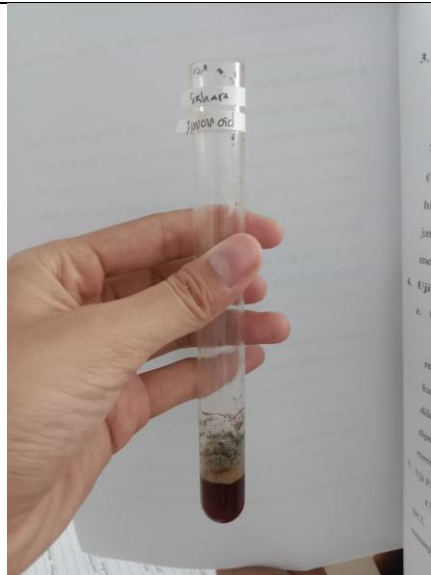
b. Pereaksi Dragendroft



c. Perekasi Bauchardatt



Uji Flavonoid



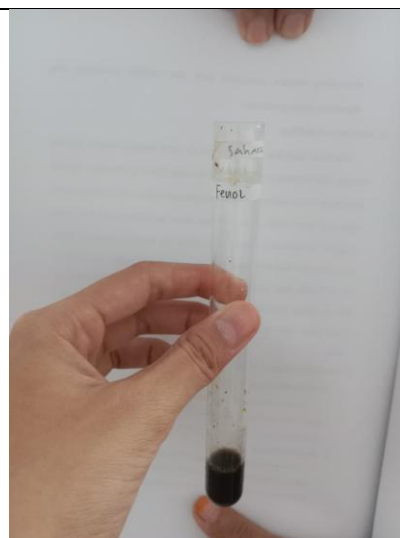
Uji Saponin



Uji Triterpenoid



Uji Fenol



Uji Tanin



Lampiran 4. Pengujian Aktivitas Antioksidan Ekstrak Batang Sagu (*Metroxylon sagu* Rottb.) Menggunakan Metode FRAP





Lampiran 5. Spektrum Larutan Standar Asam Askorbat (Vitamin C) dan Sampel Ekstrak Etanol Batang Sagu (*Metroxylon sagu* Rottb.)

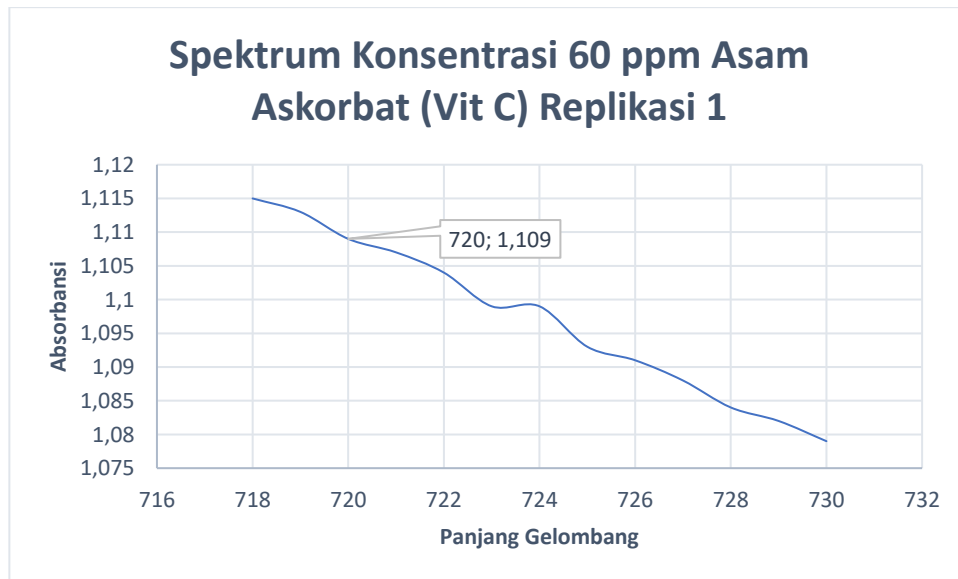
A. Spektrum Asam Askorbat (Vitamin C)

Replikasi 1

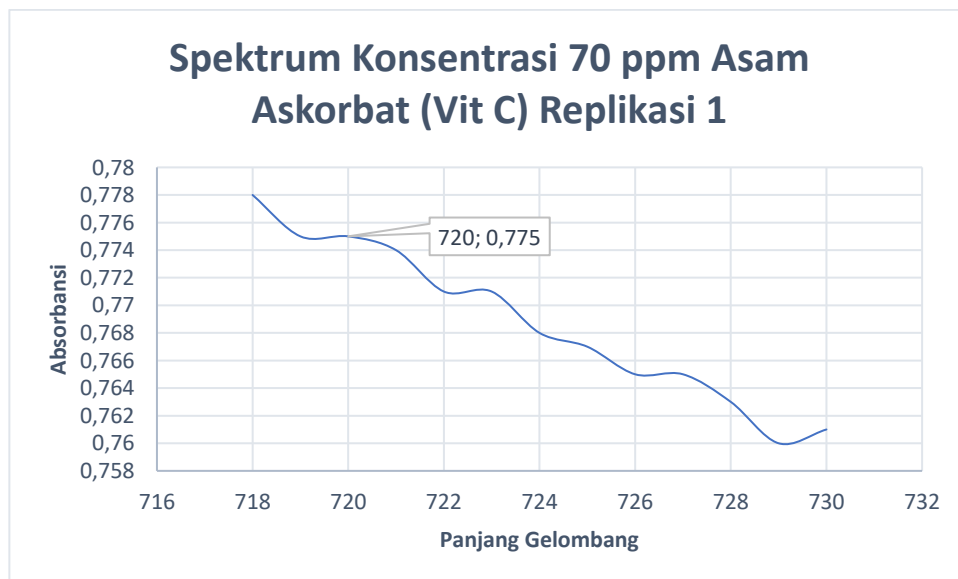
Blanko



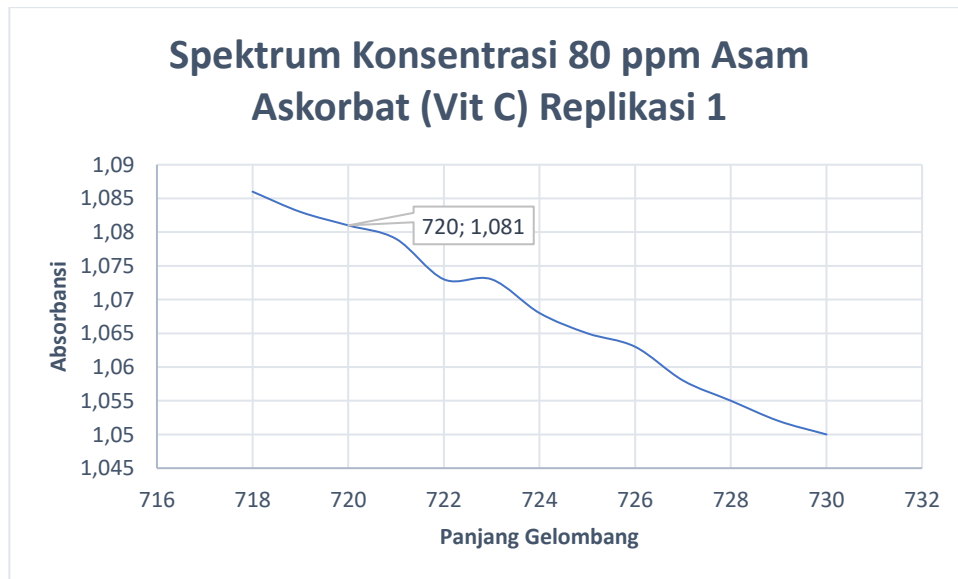
60 ppm



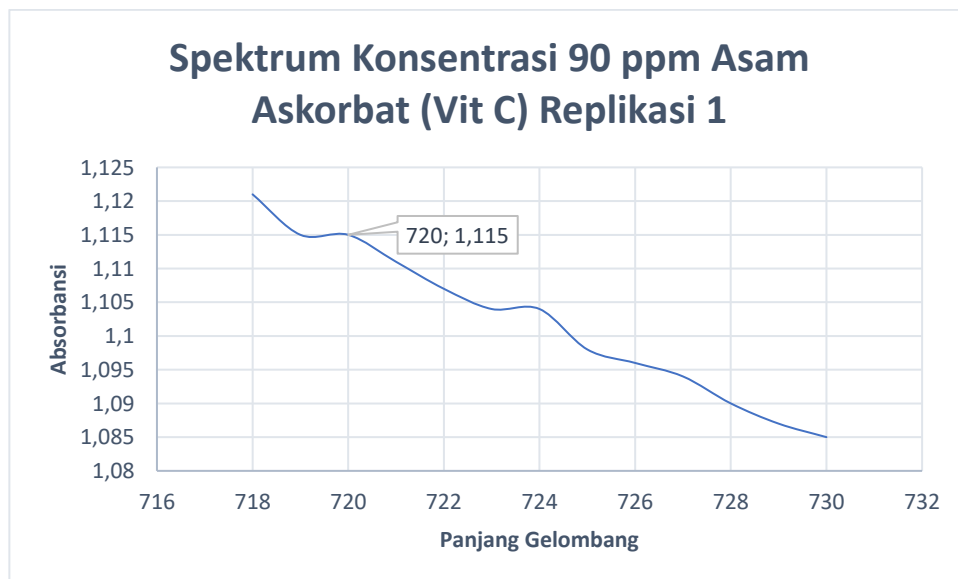
70 ppm



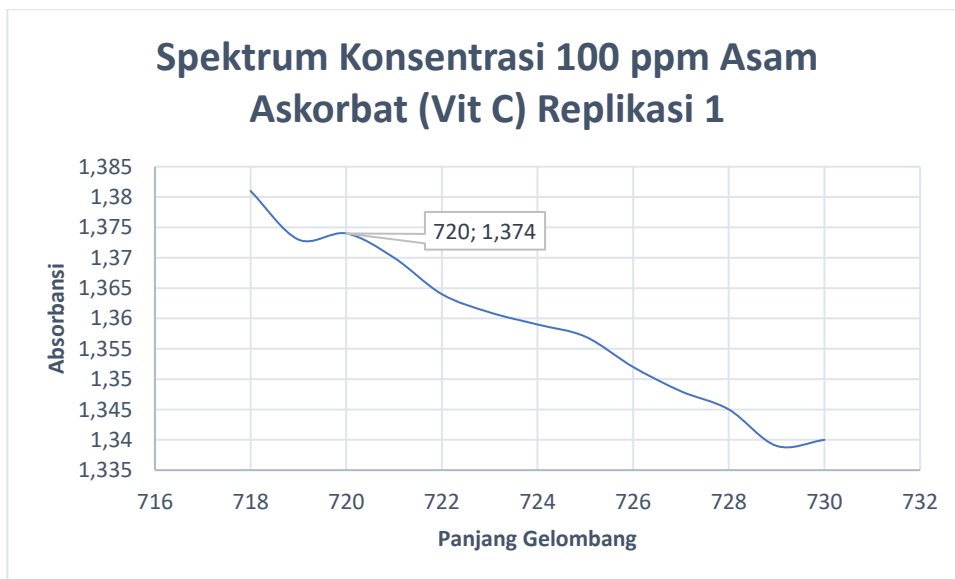
80 ppm



90 ppm



100 ppm

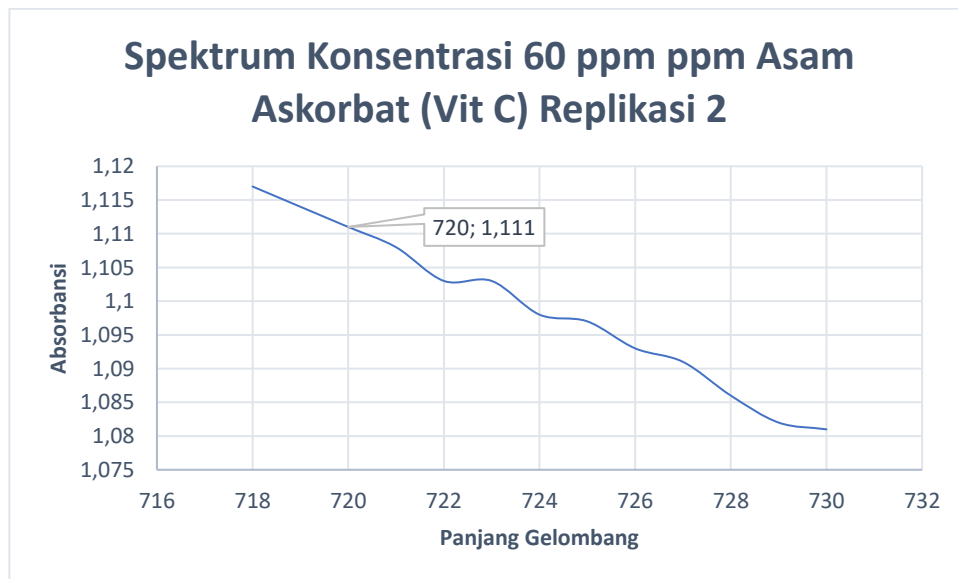


Replikasi 2

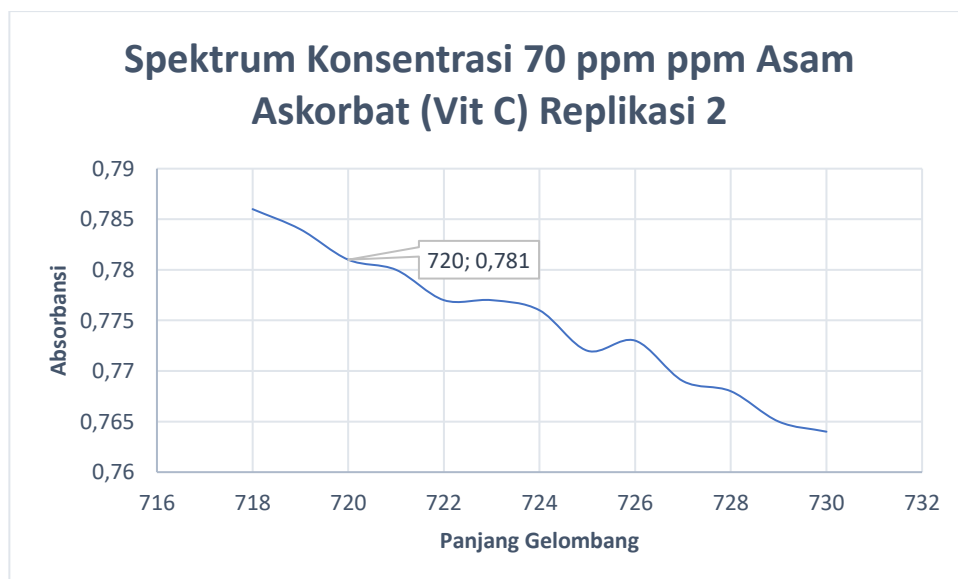
Blanko



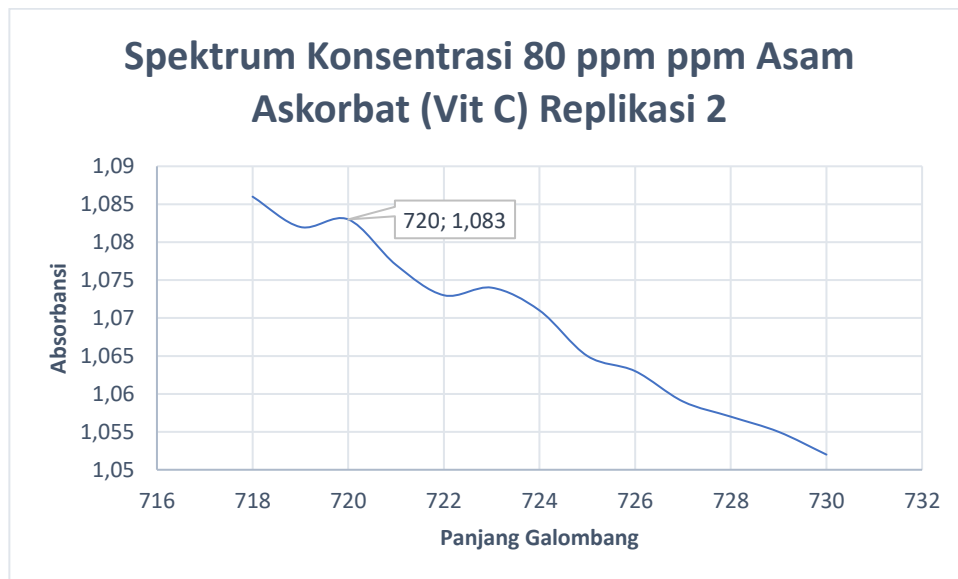
60 ppm



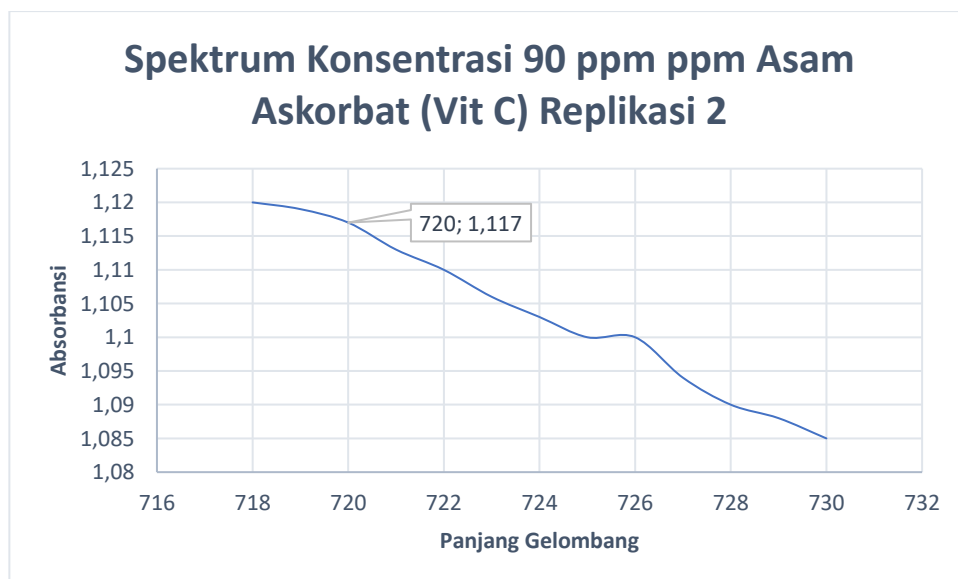
70 ppm



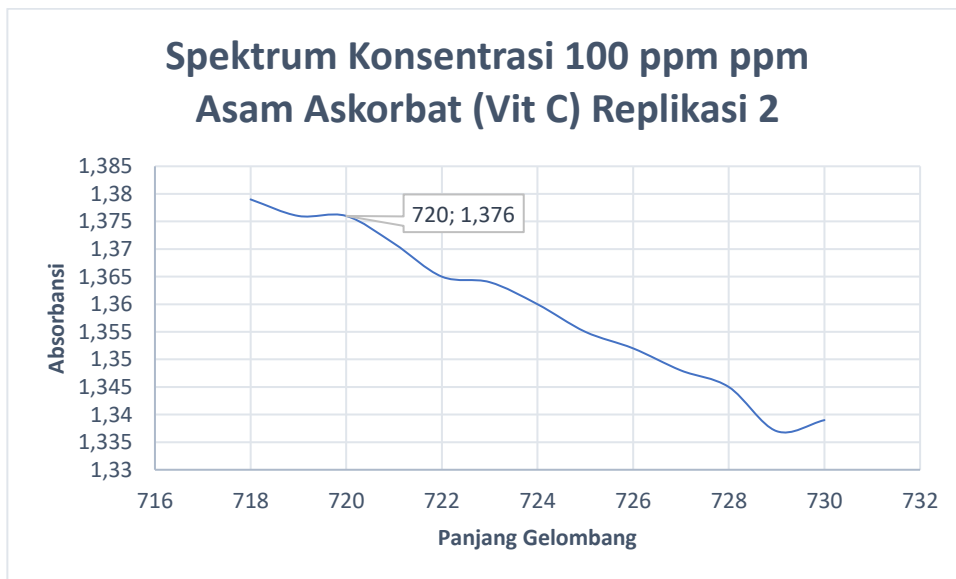
80 ppm



90 ppm



100 ppm

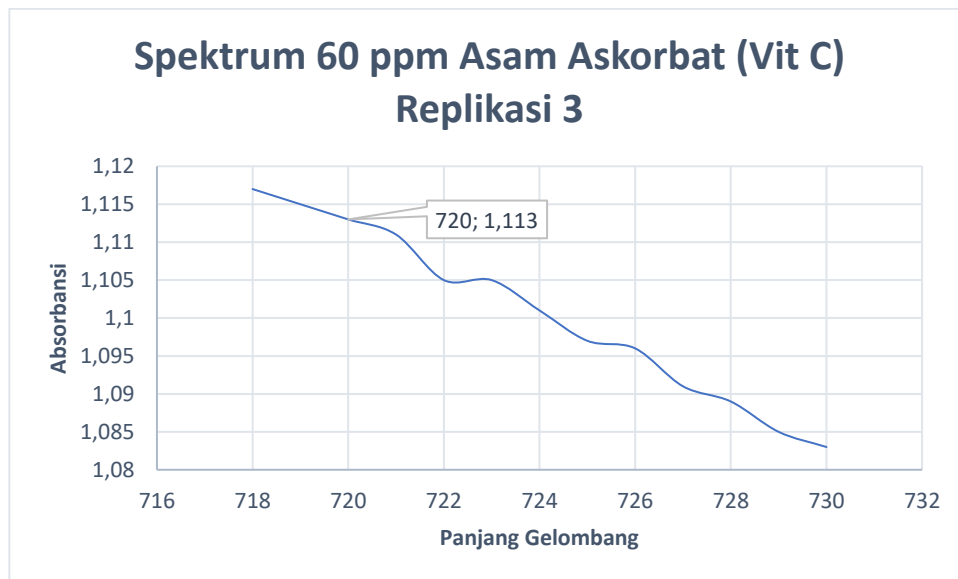


Replikasi 3

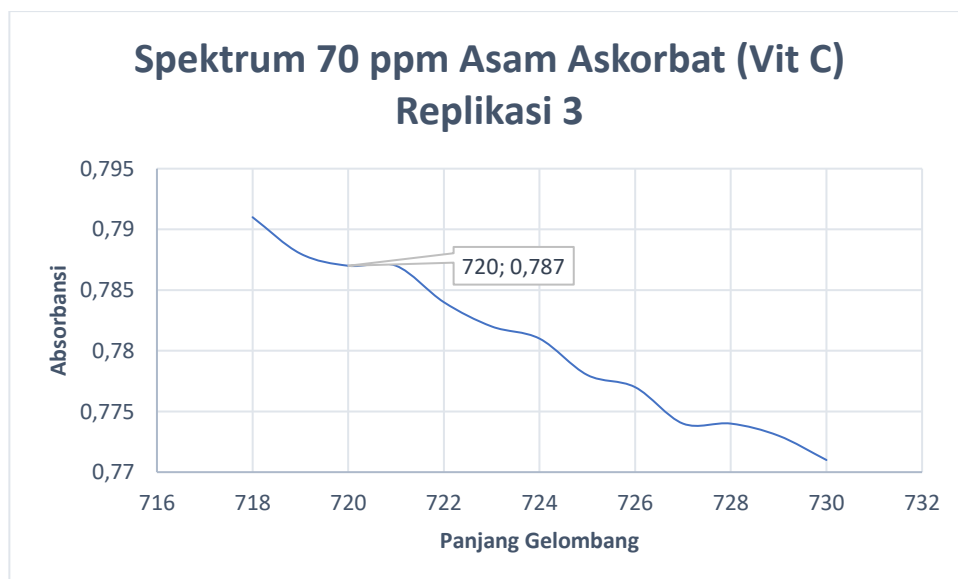
Blanko



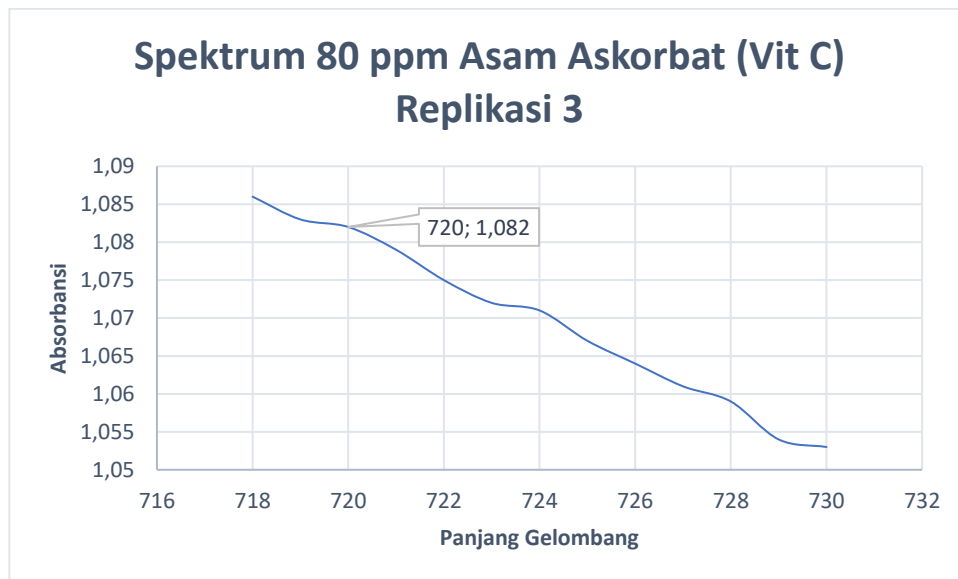
60 ppm



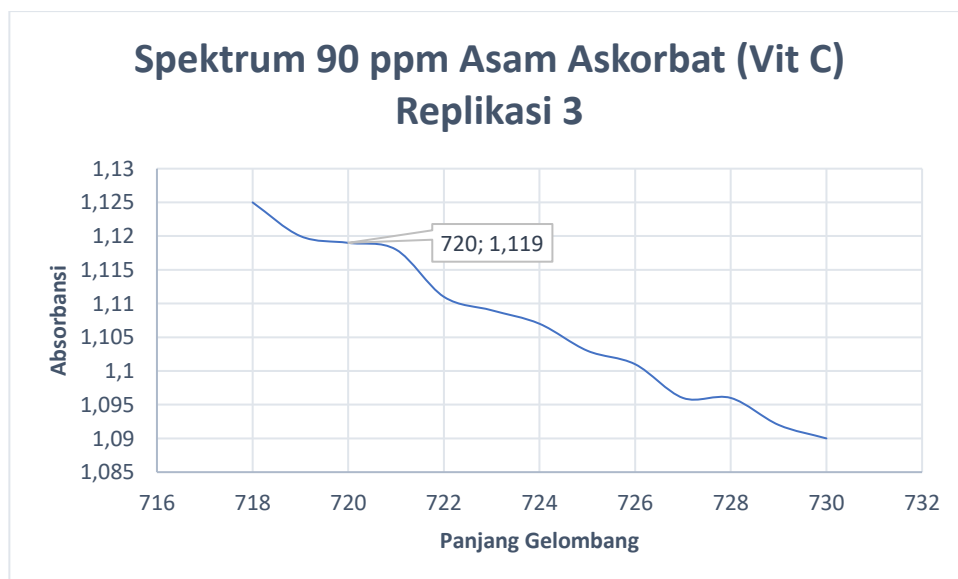
70 ppm



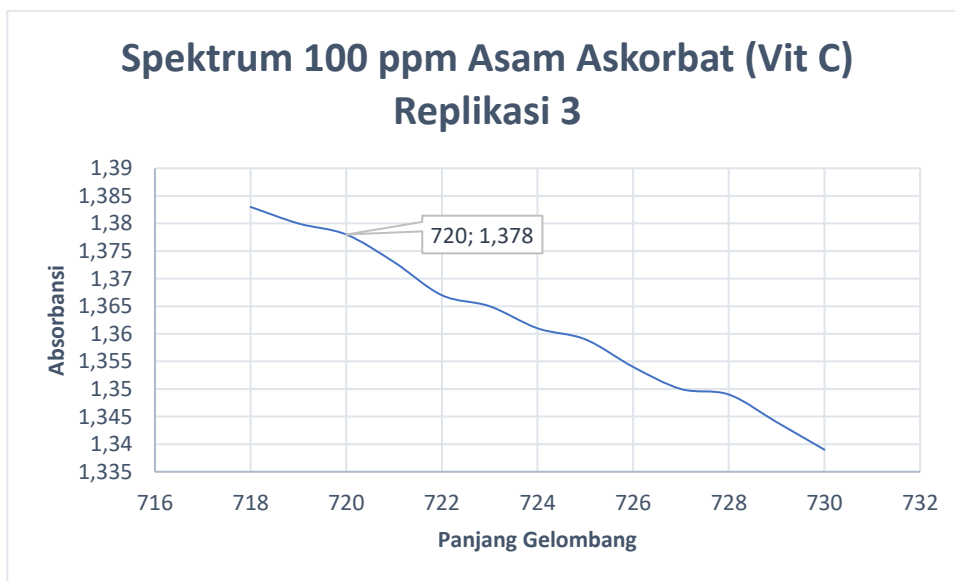
80 ppm



90 ppm



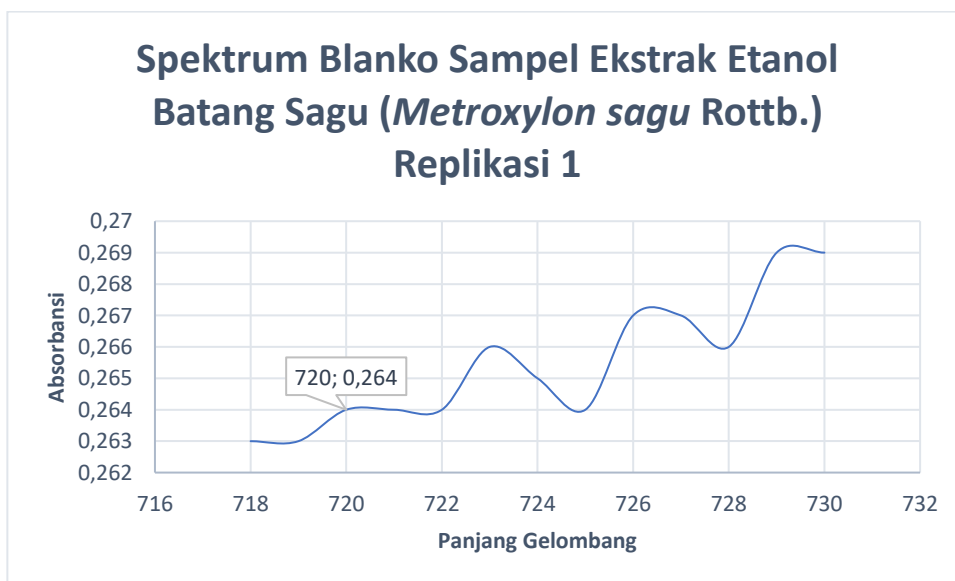
100 ppm



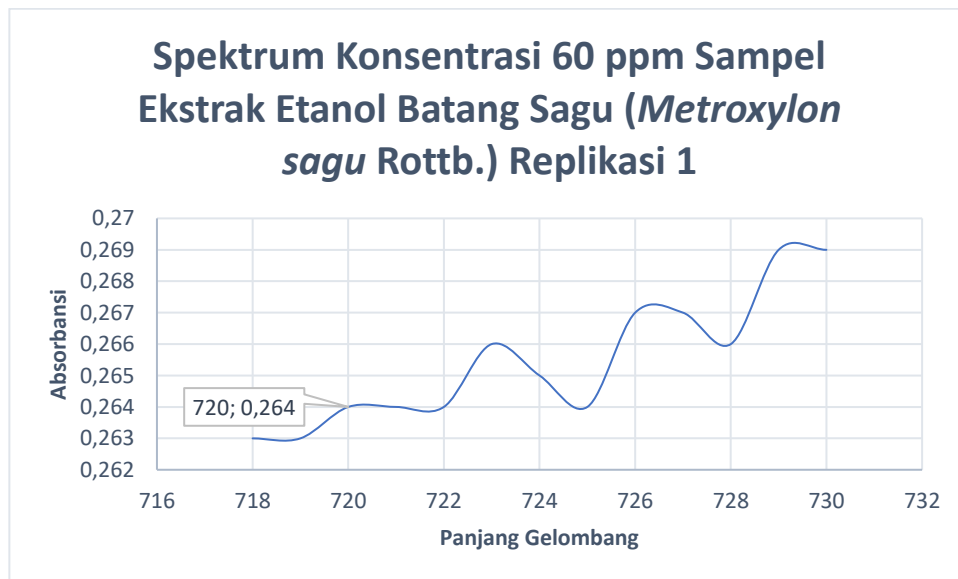
B. Spektrum sampel ekstrak etanol batang sagu (*Metroxylon sagu* Rottb.)

Replikasi 1

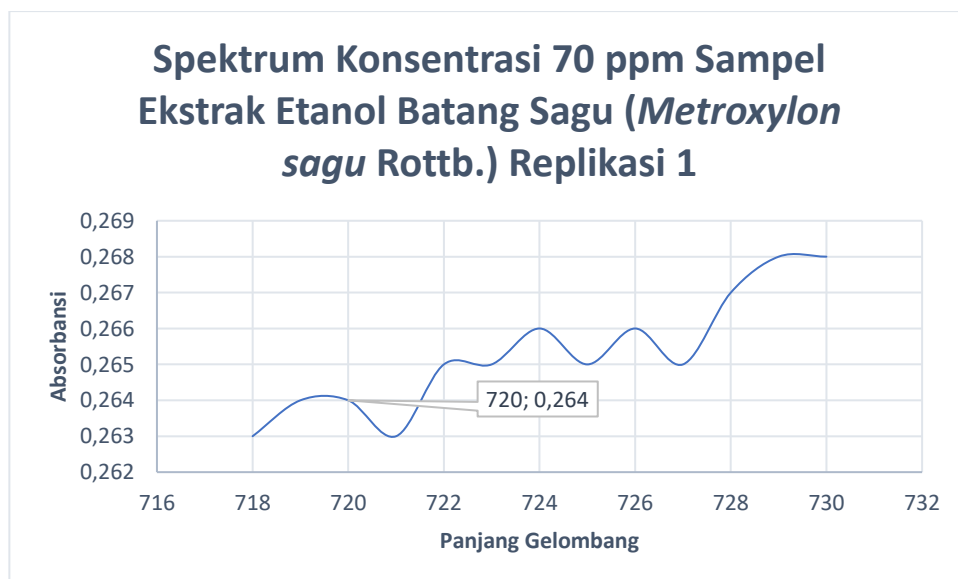
Blanko



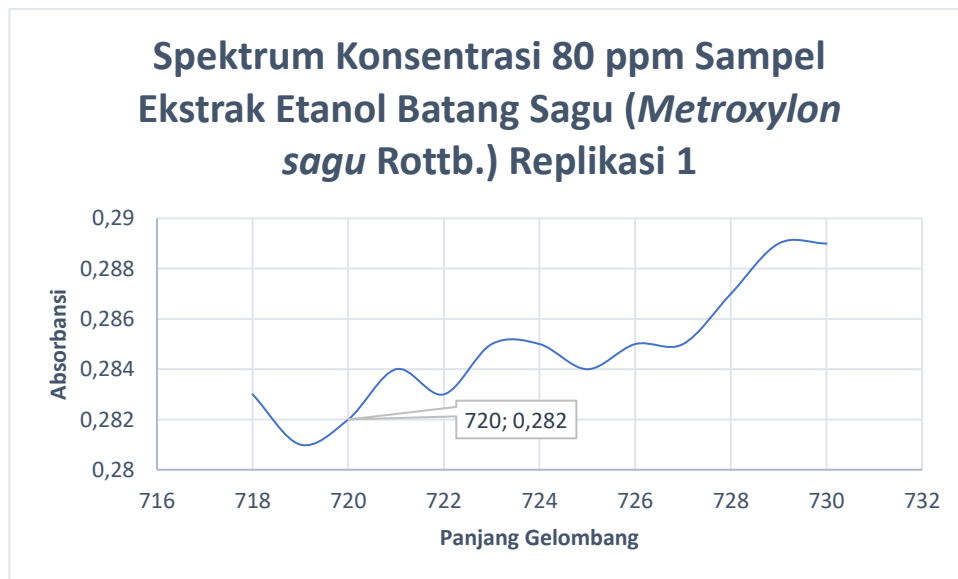
60 ppm



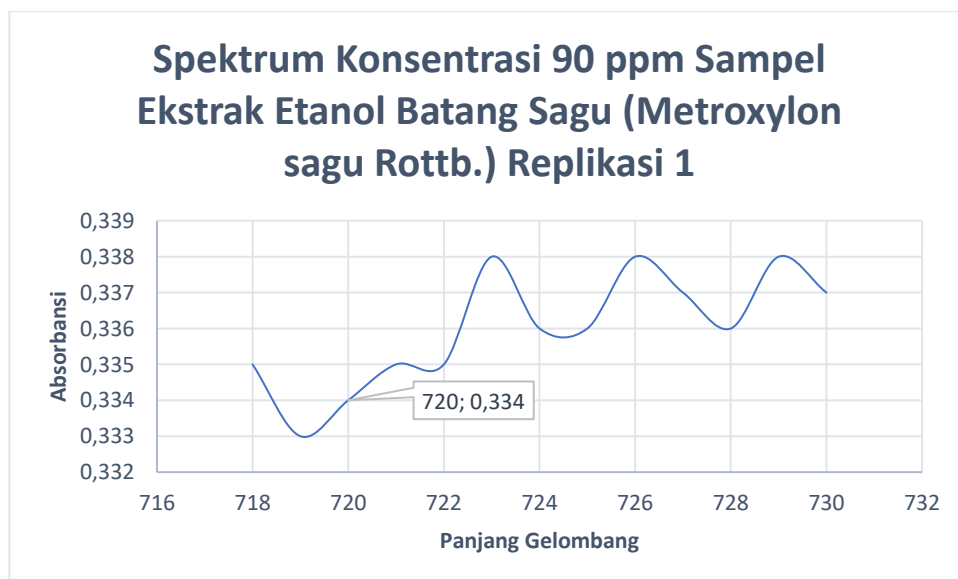
70 ppm



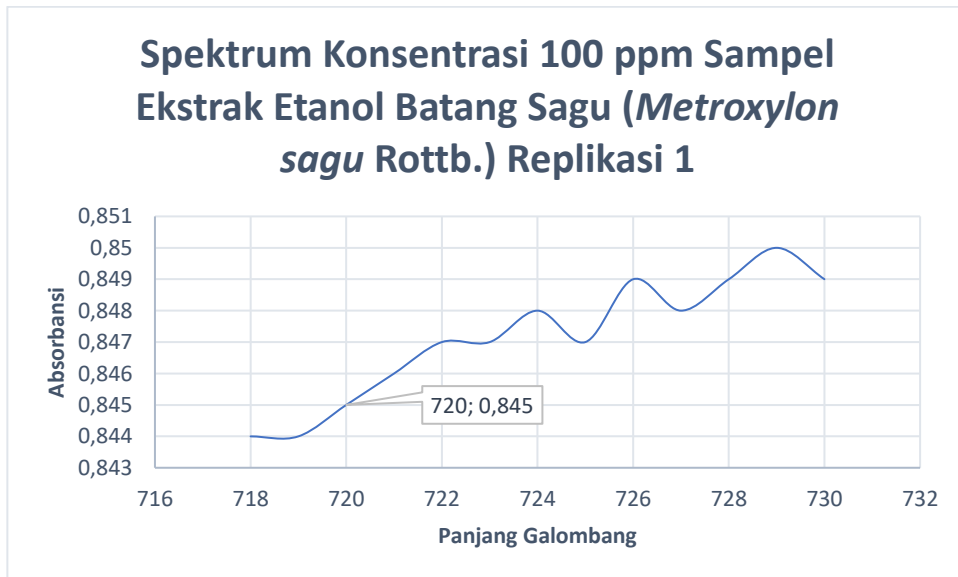
80 ppm



90 ppm

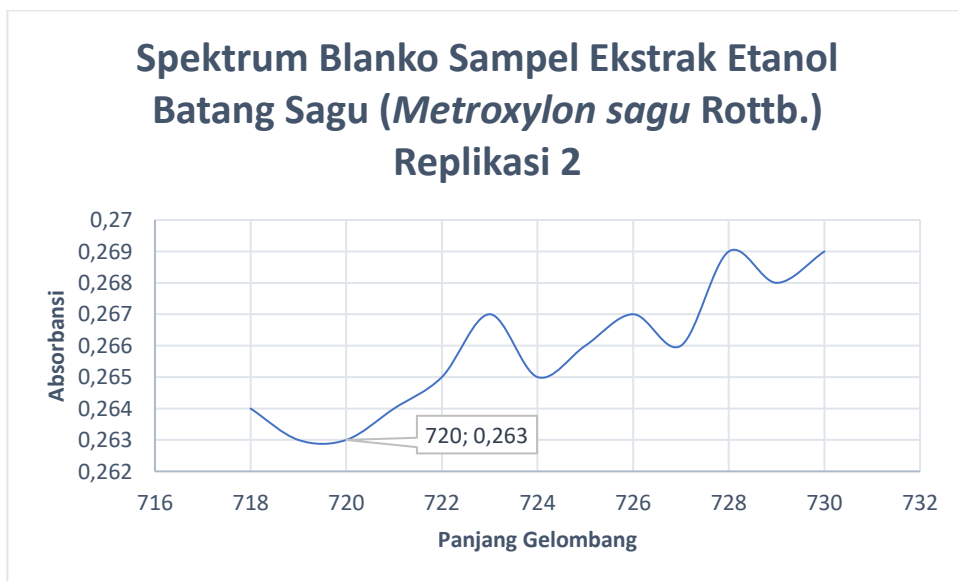


100 ppm

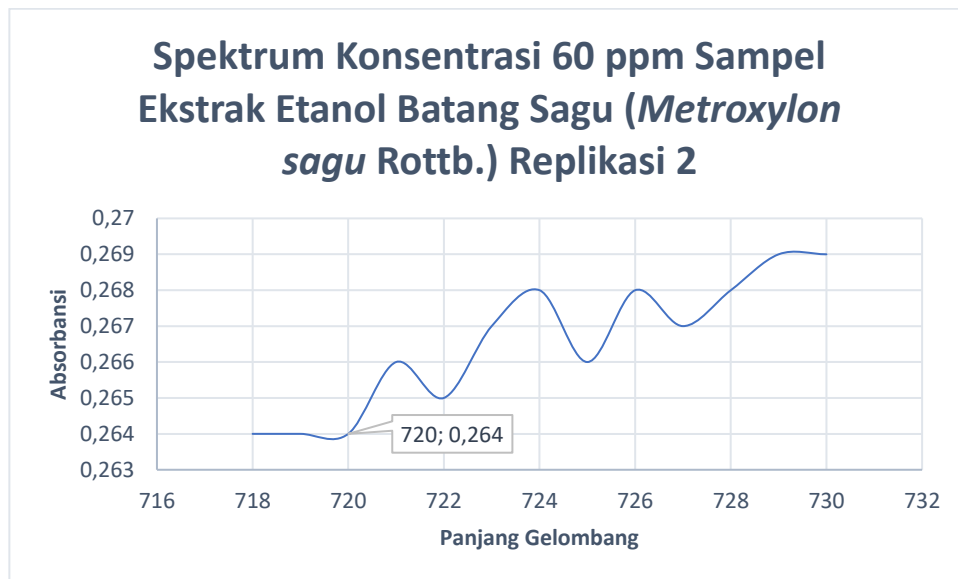


Replikasi 2

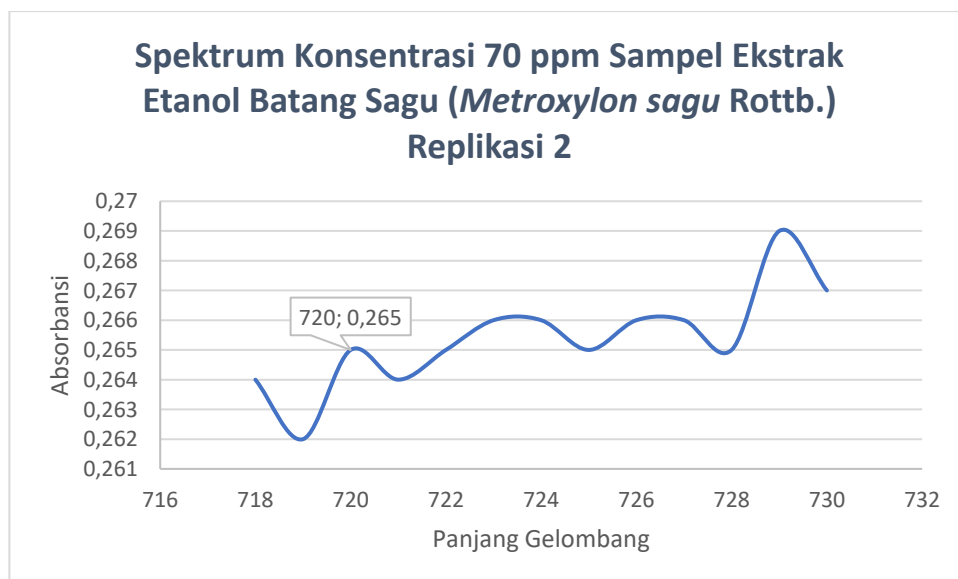
Blanko



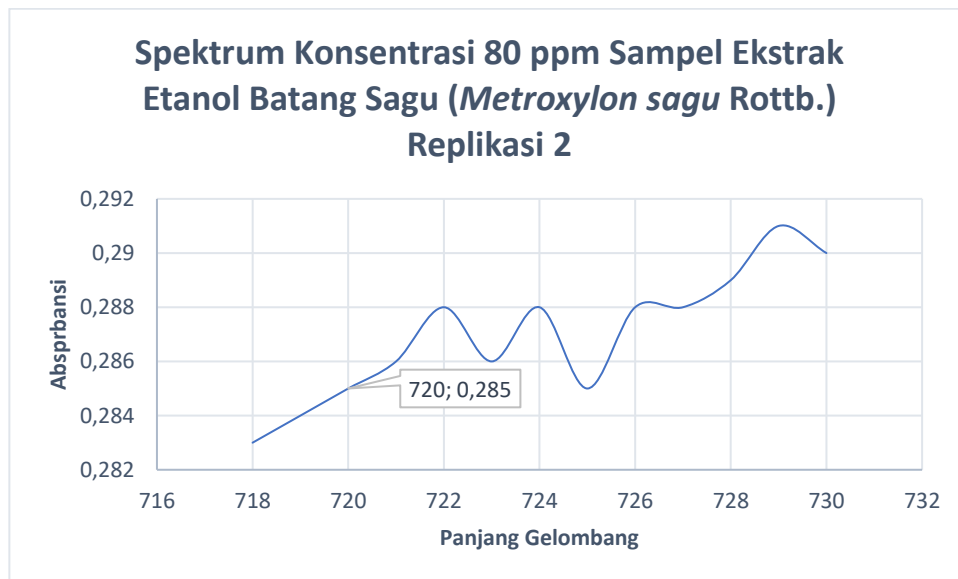
60 ppm



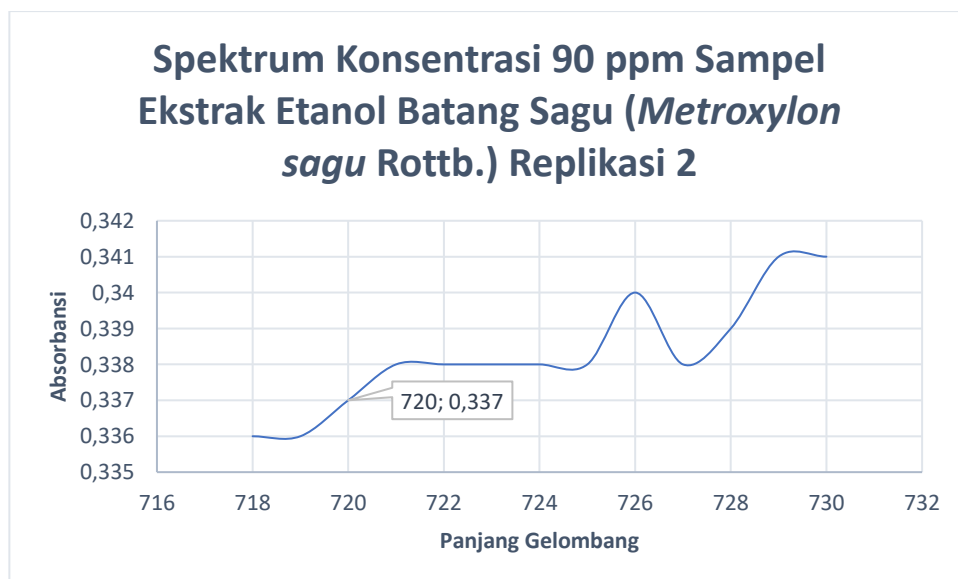
70 ppm



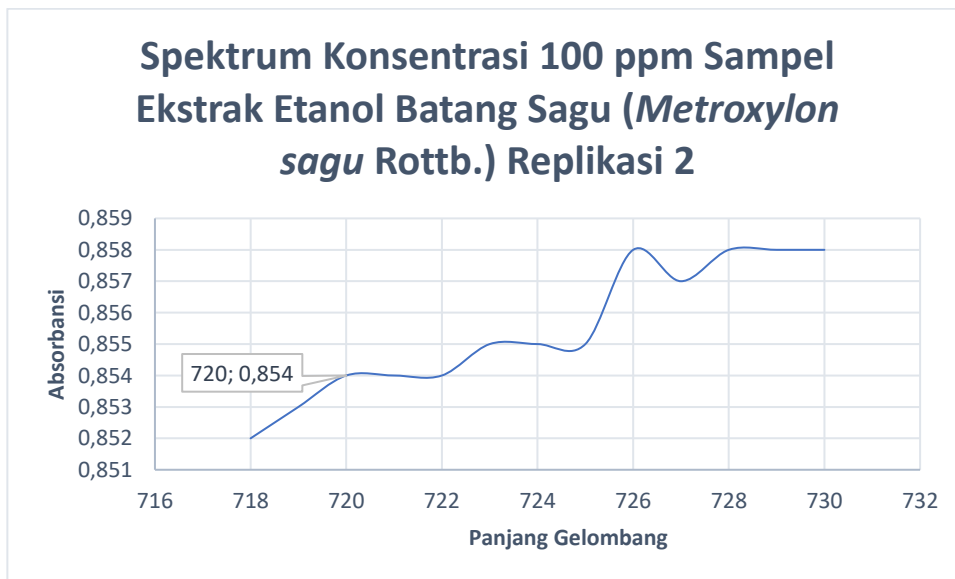
80 ppm



90 ppm

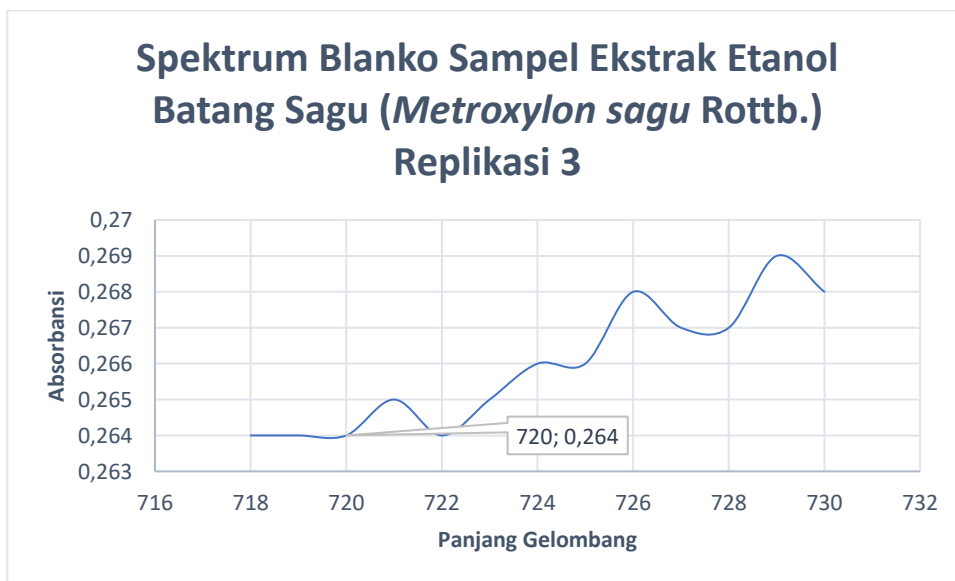


100 ppm

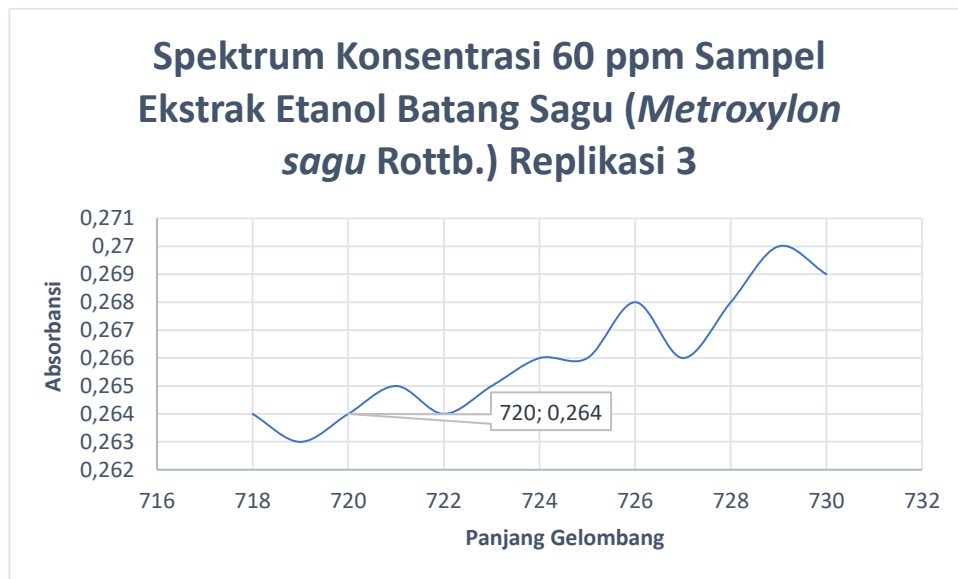


Replikasi 3

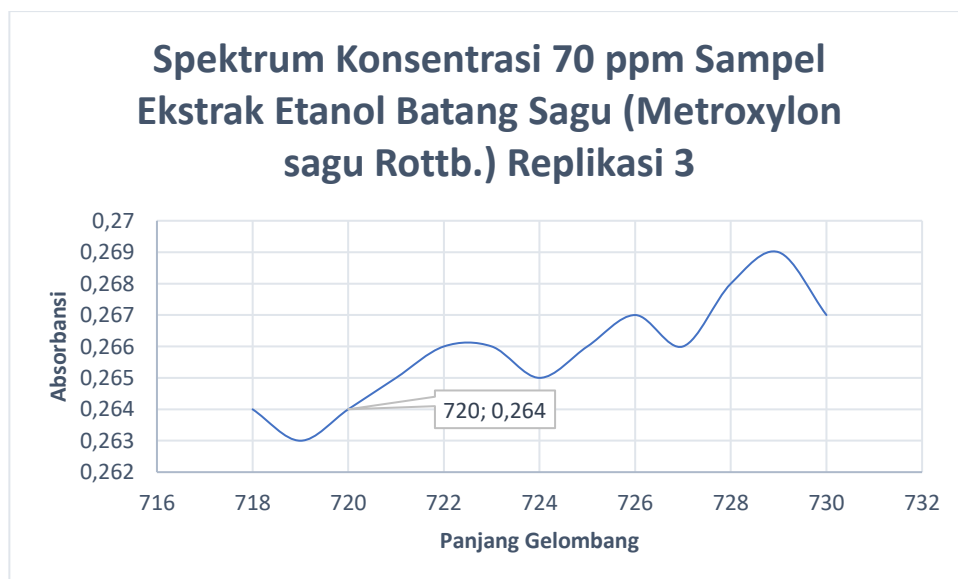
Blanko



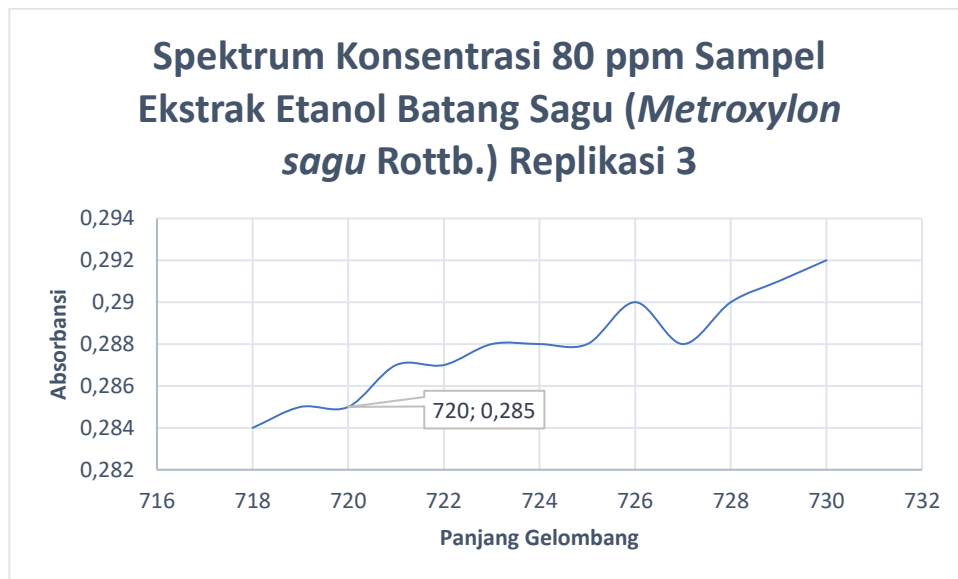
60 ppm



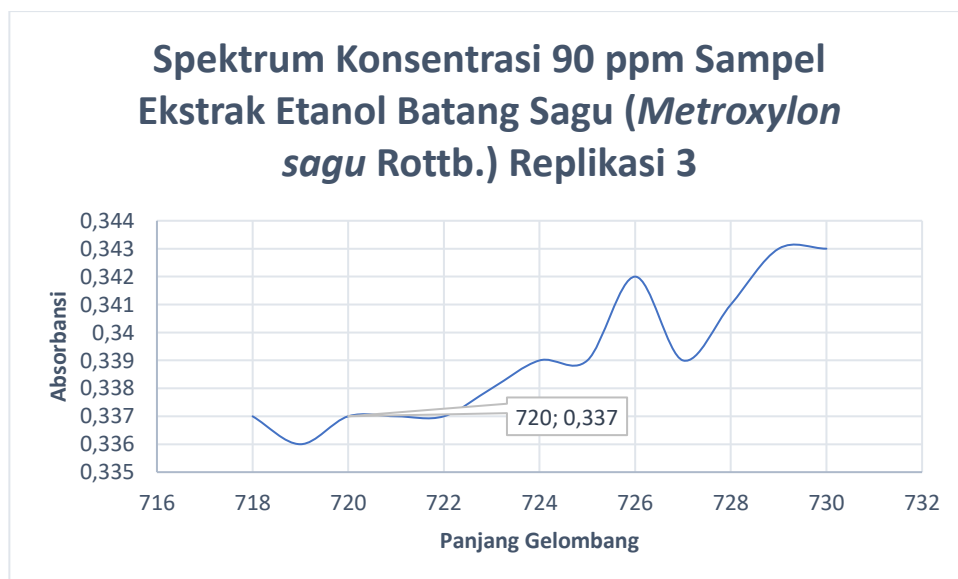
70 ppm



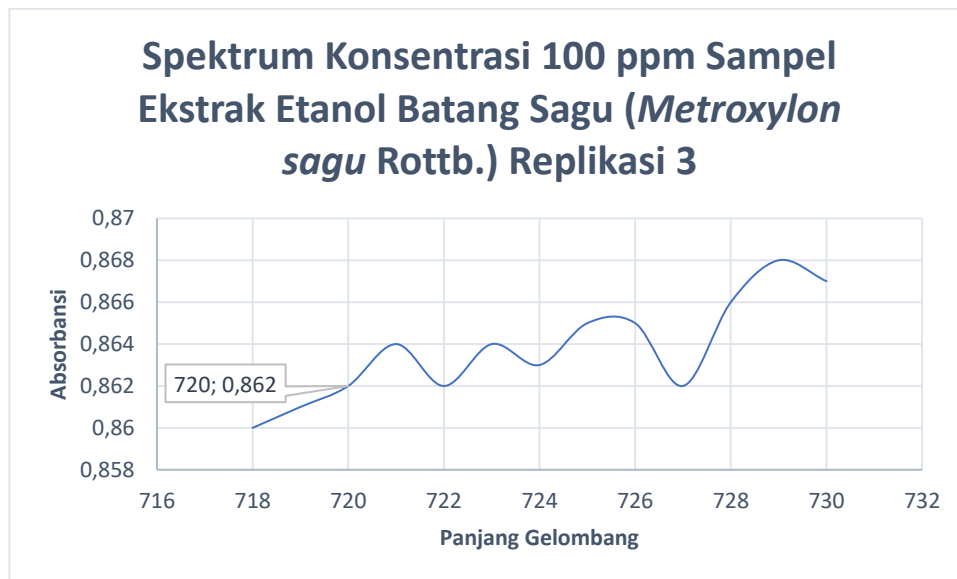
80 ppm



90 ppm



100 ppm



Lampiran 6. Perhitungan %Inhibisi, Kapasitas Antioksidan (Nilai FRAP) dan Nilai IC₅₀

A. Perhitungan %Inhibisi Sampel Ekstrak Etanol Batang Sagu (*Metroxylon sagu* Rottb.)

Rumus

$$\% \text{Inhibisi} = \frac{\text{abs. sampel} - \text{abs. blanko}}{\text{abs. standar} - \text{abs. blanko}} \times 100\%$$

$$\begin{aligned} 60 \text{ ppm} &= \frac{0,263 - 0,263}{1,111 - 0,02} \times 100\% \\ &= 0\% \end{aligned}$$

$$\begin{aligned} 70 \text{ ppm} &= \frac{0,264 - 0,263}{0,781 - 0,02} \times 100\% \\ &= \frac{0,001}{0,761} \times 100\% \\ &= 0,131\% \end{aligned}$$

$$\begin{aligned} 80 \text{ ppm} &= \frac{0,285 - 0,263}{1,082 - 0,02} \times 100\% \\ &= \frac{0,022}{1,062} \times 100\% \end{aligned}$$

$$= 2,071\%$$

$$90 \text{ ppm} = \frac{0,336-0,263}{1,117-0,02} \times 100\%$$

$$= \frac{0,073}{1,097} \times 100\%$$

$$= 6,654\%$$

$$100 \text{ ppm} = \frac{0,853-0,263}{1,376-0,02} \times 100\%$$

$$= \frac{0,59}{1,356} \times 100\%$$

$$= 43,51\%$$

B. Perhitungan Kapasitas Antioksidan (Nilai FRAP)

Persamaan Kurva Kalibrasi Asam Askorbat

$$y = ax + b$$

$$y = 0,0087x + 0,4006$$

Konsentrasi 60 ppm

Replikasi 1

$$x = \frac{0,264-0,4006}{0,0087}$$

$$= \frac{-0,1606}{0,0087}$$

$$= -18,45 \text{ mg/L}$$

Replikasi 2

$$x = \frac{0,264-0,4006}{0,0087}$$

$$= \frac{-0,1606}{0,0087}$$

$$= -18,45 \text{ mg/L}$$

Replikasi 3

$$\begin{aligned}x &= \frac{0,262-0,4006}{0,0087} \\&= \frac{-0,1386}{0,0087} \\&= -15,93 \text{ mg/L}\end{aligned}$$

Konsentrasi 70 ppm

Replikasi 1

$$\begin{aligned}x &= \frac{0,265-0,4006}{0,0087} \\&= \frac{-0,1356}{0,0087} \\&= -15,58 \text{ mg/L}\end{aligned}$$

Replikasi 2

$$\begin{aligned}x &= \frac{0,264-0,4006}{0,0087} \\&= \frac{-0,1606}{0,0087} \\&= -18,45 \text{ mg/L}\end{aligned}$$

Replikasi 3

$$\begin{aligned}x &= \frac{0,264-0,4006}{0,0087} \\&= \frac{-0,1606}{0,0087} \\&= -18,45 \text{ mg/L}\end{aligned}$$

Konsentrasi 80 ppm

Replikasi 1

$$x = \frac{0,285-0,4006}{0,0087}$$

$$= \frac{-0,1156}{0,0087}$$

$$= -13,28 \text{ mg/L}$$

Replikasi 2

$$x = \frac{0,285-0,4006}{0,0087}$$

$$= \frac{-0,1156}{0,0087}$$

$$= -13,28 \text{ mg/L}$$

Replikasi 3

$$x = \frac{0,282-0,4006}{0,0087}$$

$$= \frac{-0,1186}{0,0087}$$

$$= -13,63 \text{ mg/L}$$

Konsentrasi 90 ppm

Replikasi 1

$$x = \frac{0,337-0,4006}{0,0087}$$

$$= \frac{-0,0636}{0,0087}$$

$$= -7,31 \text{ mg/L}$$

Replikasi 2

$$x = \frac{0,337-0,4006}{0,0087}$$

$$= \frac{-0,0636}{0,0087}$$

$$= -7,31 \text{ mg/L}$$

Replikasi 3

$$x = \frac{0,334-0,4006}{0,0087}$$

$$= \frac{-0,0666}{0,0087}$$

$$= -7,65 \text{ mg/L}$$

Konsentrasi 100 ppm

Replikasi 1

$$x = \frac{0,853-0,4006}{0,0087}$$

$$= \frac{0,4524}{0,0087}$$

$$= 52 \text{ mg/L}$$

Replikasi 2

$$x = \frac{0,862-0,4006}{0,0087}$$

$$= \frac{0,4614}{0,0087}$$

$$= 53,03 \text{ mg/L}$$

Replikasi 3

$$x = \frac{0,845-0,4006}{0,0087}$$

$$= \frac{0,4444}{0,0087}$$

$$= 51,08 \text{ mg/L}$$

Nilai FRAP (mgAAE/g ekstrak)

$$\text{Rumus: Nilai FRAP} = \frac{x \times v}{w}$$

Konsentrasi 60 ppm

Replikasi 1

$$\text{Nilai FRAP} = \frac{-18,45 \times 0,005}{0,005}$$

$$= \frac{-0,09225}{0,005}$$

$$= -18,45 \text{ mgAAE/g ekstrak}$$

Replikasi 2

$$\text{Nilai FRAP} = \frac{-18,45 \times 0,005}{0,005}$$

$$= \frac{-0,09225}{0,005}$$

$$= -18,45 \text{ mgAAE/g ekstrak}$$

Replikasi 3

$$\text{Nilai FRAP} = \frac{-15,93 \times 0,005}{0,005}$$

$$= \frac{-0,07815}{0,005}$$

$$= -15,93 \text{ mgAAE/g ekstrak}$$

Konsentrasi 70 ppm

Replikasi 1

$$\text{Nilai FRAP} = \frac{-15,98 \times 0,005}{0,005}$$

$$= \frac{-0,0779}{0,005}$$

$$= -15,58 \text{ mgAAE/g ekstrak}$$

Replikasi 2

$$\text{Nilai FRAP} = \frac{-18,45 \times 0,005}{0,005}$$

$$= \frac{-0,09225}{0,005}$$

$$= -18,45 \text{ mgAAE/g ekstrak}$$

Replikasi 3

$$\begin{aligned}\text{Nilai FRAP} &= \frac{-18,45 \times 0,005}{0,005} \\ &= \frac{-0,09225}{0,005} \\ &= -18,45 \text{ mgAAE/g ekstrak}\end{aligned}$$

Konsentrasi 80 ppm

Replikasi 1

$$\begin{aligned}\text{Nilai FRAP} &= \frac{-13,28 \times 0,005}{0,005} \\ &= \frac{-0,0664}{0,005} \\ &= -13,28 \text{ mgAAE/g ekstrak}\end{aligned}$$

Replikasi 2

$$\begin{aligned}\text{Nilai FRAP} &= \frac{-13,28 \times 0,005}{0,005} \\ &= \frac{-0,0664}{0,005} \\ &= -13,28 \text{ mgAAE/g ekstrak}\end{aligned}$$

Replikasi 3

$$\begin{aligned}\text{Nilai FRAP} &= \frac{-13,63 \times 0,005}{0,005} \\ &= \frac{-0,06815}{0,005} \\ &= -13,63 \text{ mgAAE/g ekstrak}\end{aligned}$$

Konsentrasi 90 ppm

Replikasi 1

$$\text{Nilai FRAP} = \frac{-7,31 \times 0,005}{0,005}$$

$$= \frac{-0,03655}{0,005}$$

$$= -7,31 \text{ mgAAE/g ekstrak}$$

Replikasi 2

$$\text{Nilai FRAP} = \frac{-7,31 \times 0,005}{0,005}$$

$$= \frac{-0,03655}{0,005}$$

$$= -7,31 \text{ mgAAE/g ekstrak}$$

Replikasi 3

$$\text{Nilai FRAP} = \frac{-7,65 \times 0,005}{0,005}$$

$$= \frac{-0,03825}{0,005}$$

$$= -7,65 \text{ mgAAE/g ekstrak}$$

Konsentrasi 100 ppm

Replikasi 1

$$\text{Nilai FRAP} = \frac{52 \times 0,005}{0,005}$$

$$= \frac{0,26}{0,005}$$

$$= 52 \text{ mgAAE/g ekstrak}$$

Replikasi 2

$$\text{Nilai FRAP} = \frac{53,03 \times 0,005}{0,005}$$

$$= \frac{0,265}{0,005}$$

$$= 53,03 \text{ mgAAE/g ekstrak}$$

Replikasi 3

$$\begin{aligned}\text{Nilai FRAP} &= \frac{51,08 \times 0,005}{0,005} \\ &= \frac{0,2554}{0,005} \\ &= 51,08 \text{ mgAAE/g ekstrak}\end{aligned}$$

C. Perhitungan Nilai IC_{50}

Rumus

$$IC_{50} = \frac{50 + a}{b}$$

$$IC_{50} : y = 0,9354x - 64,361$$

$$x = \frac{50 + 64,361}{0,9354}$$

$$= \frac{114,361}{0,9354}$$

$$IC_{50} = 122,25 \text{ (Sedang)}$$