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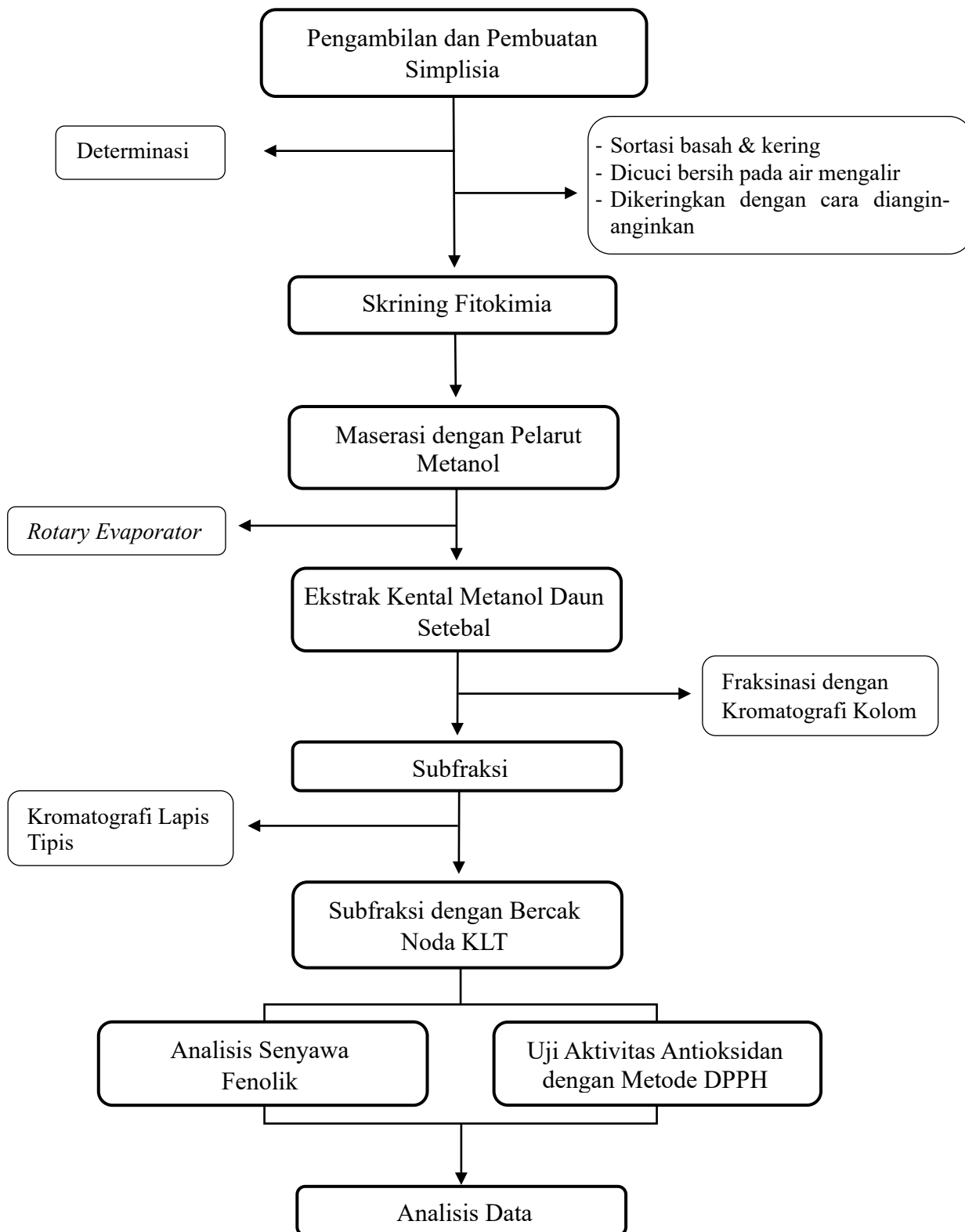
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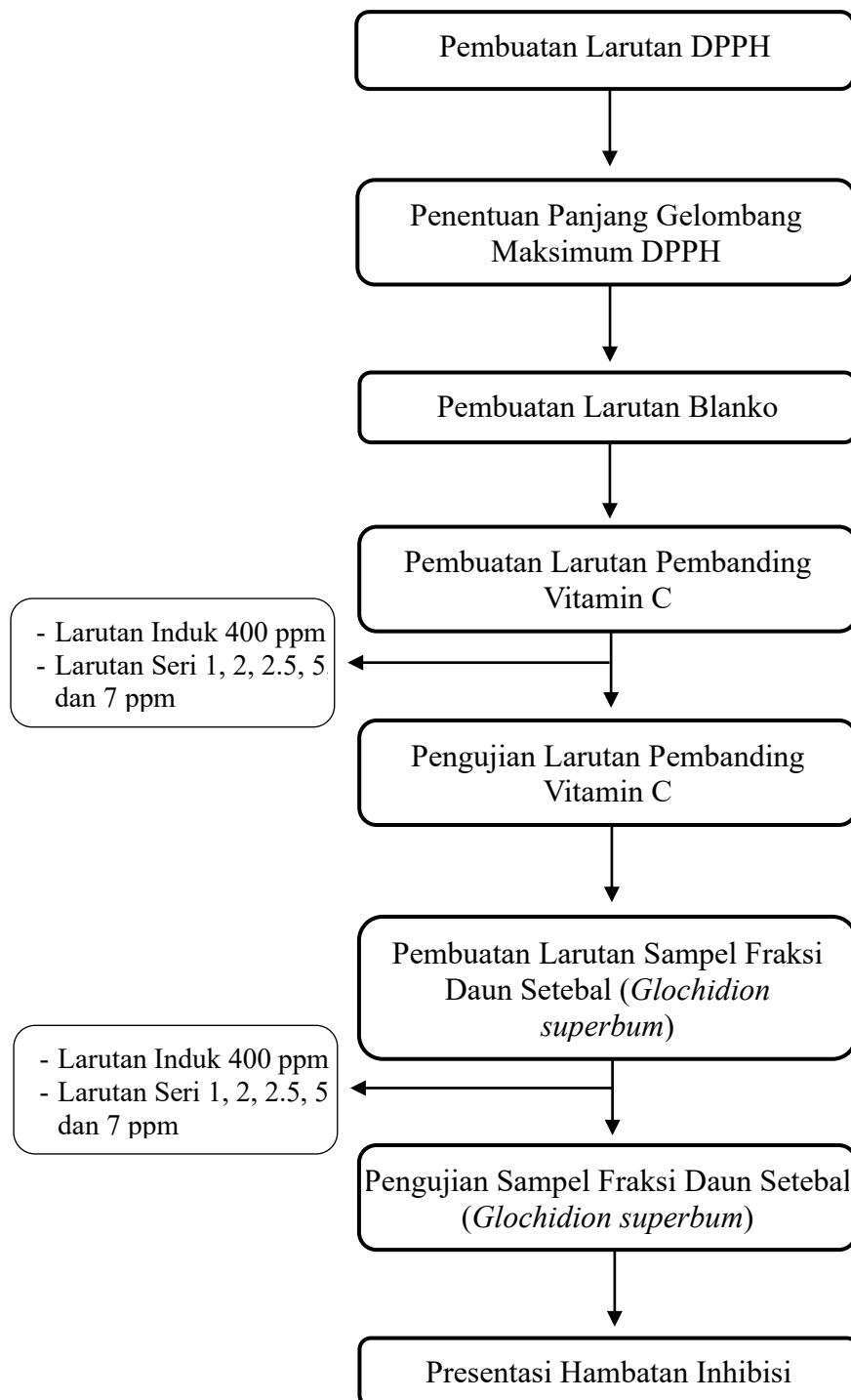
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Zheng, M., Liu, Y., Zhang, G., Yang, Z., Xu, W., & Chen, Q. (2024). *The Antioxidant Properties, Metabolism, Application and Mechanism of Ferulic Acid in Medicine, Food, Cosmetics, Livestock and Poultry*. *Antioxidants*, 13(853), 1–17.

## LAMPIRAN

Lampiran 1. Skema Kerja Penelitian



**Lampiran 2.** Skema Kerja Analisis Aktivitas Antioksidan Metode DPPH

### Lampiran 3. Surat Determinasi Tanaman Setebal



**HERBARIUM UNIVERSITAS ANDALAS (ANDA)**  
 Departemen Biologi FMIPA Universitas Andalas Kampus Limau Manih Padang  
 Sumbang Indonesia 25163 Telp. +62-751-777427 e-mail: herbariumanda@yahoo.com

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Nomor : 246/K-ID/ANDA/IV/2025  
 Lampiran : -  
 Perihal : Hasil Identifikasi

Kepada yth,  
 apt. Habibie Deswilyaz Ghiffari, M. Farm  
 Di  
 Tempat

Dengan hormat,  
 Sehubungan dengan surat permohonan determinasi sampel dari Institut Kesehatan Mitra Bunda No. 058/K/S1-FARM/IKMB/IV/2025 tanggal 21 April 2025 di Herbarium Universitas Andalas Departemen Biologi FMIPA Universitas Andalas, kami telah membantu mengidentifikasi tumbuhan yang dibawa, dari:

Nama : apt. Habibie Deswilyaz Ghiffari, M. Farm  
 Instansi : Institut Kesehatan Mitra Bunda

Berikut ini diberikan hasil identifikasi yang dikeluarkan dari Herbarium Universitas Andalas.

No	Family	Spesies	Sinonim	Nama Lokal
1.	Phyllanthaceae	<i>Phyllanthus superbus</i> (Baill.) Mull. Arg.	<i>Glochidion superbum</i> Baill.	Tanaman Setebal

Demikian surat ini dibuat untuk dapat digunakan seperlunya.

Padang, 30 April 2025  
 Kepala,  
  
 Dr. Nurainas  
 NIP. 196908141995122001



## Lampiran 4. *Ethical Clearence*



### YAYASAN HARAPAN BUNDA BATAM INSTITUT KESEHATAN MITRA BUNDA KOMITE ETIK PENELITIAN

Jl. Seraya No 1 KOTA BATAM Telp/Fax (0778) 429431, website : <http://ikmb.ac.id>  
SURAT KEPUTUSAN MENTERI PENDIDIKAN DAN KEBUDAYAAN REPUBLIK INDONESIA No. 284/M/2020

#### KOMITE ETIK PENELITIAN INSTITUT KESEHATAN MITRA BUNDA THE RESEARCH ETHICAL COMMITTEE INSTITUT KESEHATAN MITRA BUNDA

SURAT KETERANGAN  
ETHICAL APPROVAL  
No. 132/K/KEP/IKMB/IX/2025

Komite Etik Penelitian Institut Kesehatan Mitra Bunda, menyatakan dengan ini bahwa penelitian dengan judul :  
*The Research Ethical Committee of Institut Kesehatan Mitra Bunda states hereby that the following proposal :*

“Isolasi Senyawa Utama Daun Setebal (*Glochidion superbum*) dan Uji Aktivitas Antioksidan dengan Metode DPPH (1,1-difenil-2-pikrilhidrazil)”  
*“Isolation of Main Compounds of Setebal Leaves (*Glochidion superbum*) and Antioxidant Activity Test Using the DPPH (1,1-diphenyl-2-picrylhydrazyl) Method”*


Peneliti Utama : Rachel Bintang  
*Principal Investigator*

Lokasi Penelitian : Laboratorium Kimia Bahan Alam Institut Kesehatan Mitra Bunda Batam  
*Research Location*



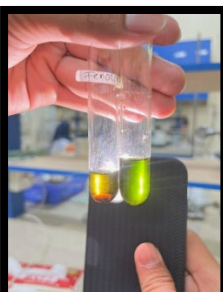

Waktu Penelitian : Mei - September 2025  
*Time Schedule*


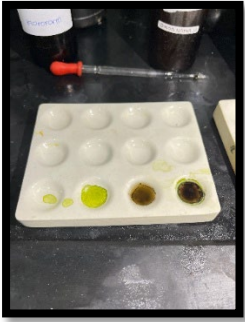
Responden/Subjek Penelitian : 1 Produk  
*Respondent/Research Subject*

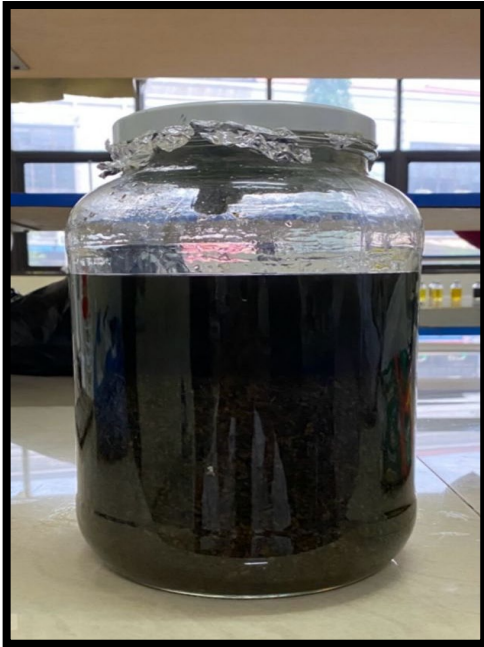
Telah melalui prosedur kaji etik dan dinyatakan layak untuk dilaksanakan  
*Has proceeded the ethical assessment procedure and been approved for implementation*

Batam, 15 September 2025  
Ketua / Chairman,  
  
dr. Ibnu Rushd, M.K.M

**Lampiran 5.** Hasil Skrining Fitokimia Serbuk Daun Setebal

Uji Senyawa	Reagen	Keterangan	Gambar
Alkaloid	Reagen <i>Dragendorff</i> Reagen <i>Mayer</i>	-	
Flavonoid	Magnesium HCl	+	
Fenolik	FeCl <sub>3</sub>	+	
Tanin	Putih telur	+	

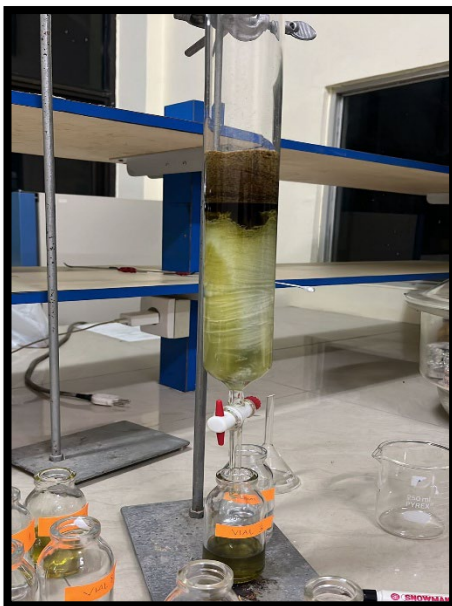
Saponin	Air panas HCl	-	
Steroid dan Triterpenoid	$H_2SO_4$ Asam asetat glasial	+	

**Lampiran 6. Dokumentasi Ekstraksi Daun Setebal**

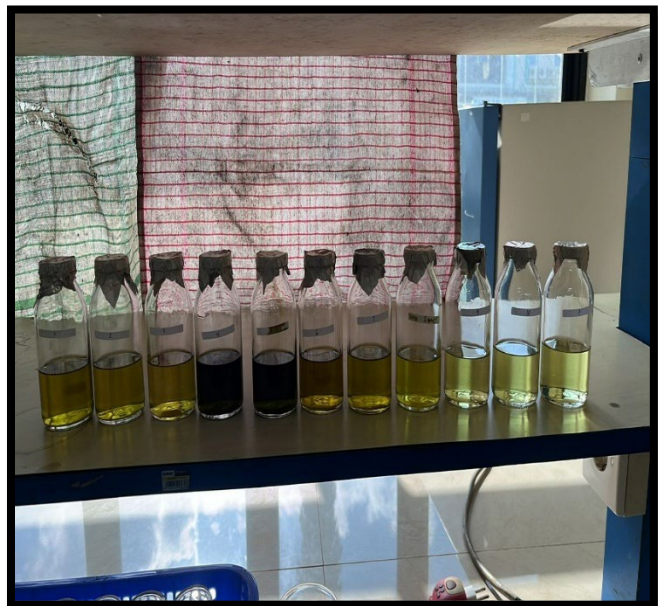
Proses Maserasi



Hasil Ekstrak Kental

**Lampiran 7. Dokumentasi Fraksinasi dengan Kromatografi Kolom**

Proses Kromatografi Kolom



Hasil Kromatografi Kolom

**Lampiran 8. Dokumentasi Analisis Senyawa Fenolik**

Pengujian Senyawa Fenolik

**Lampiran 9. Dokumentasi Pengujian Spektrofotometri UV-Vis**Larutan Baku Induk DPPH  
200 ppmLarutan Baku Induk Vitamin  
C 400 ppm



Larutan Pembanding Vitamin C (1 ppm, 2 ppm, 2.5 ppm, 5 ppm, dan 7 ppm)



Larutan Sampel 1 (1 ppm, 2 ppm, 2.5 ppm, 5 ppm, dan 7 ppm)



Larutan Sampel 2 (1 ppm, 2 ppm, 2.5 ppm, 5 ppm, dan 7 ppm)











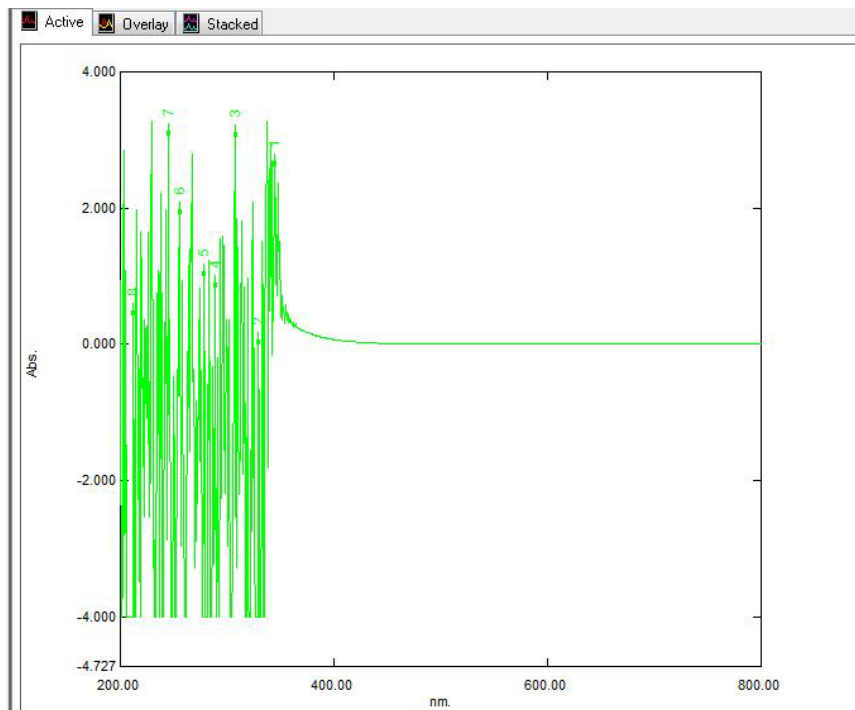
Larutan Sampel 3 (1 ppm, 2 ppm, 2.5 ppm, 5 ppm,  
dan 7 ppm)




Larutan Sampel 4 (1 ppm, 2 ppm, 2.5 ppm, 5 ppm,  
dan 7 ppm)

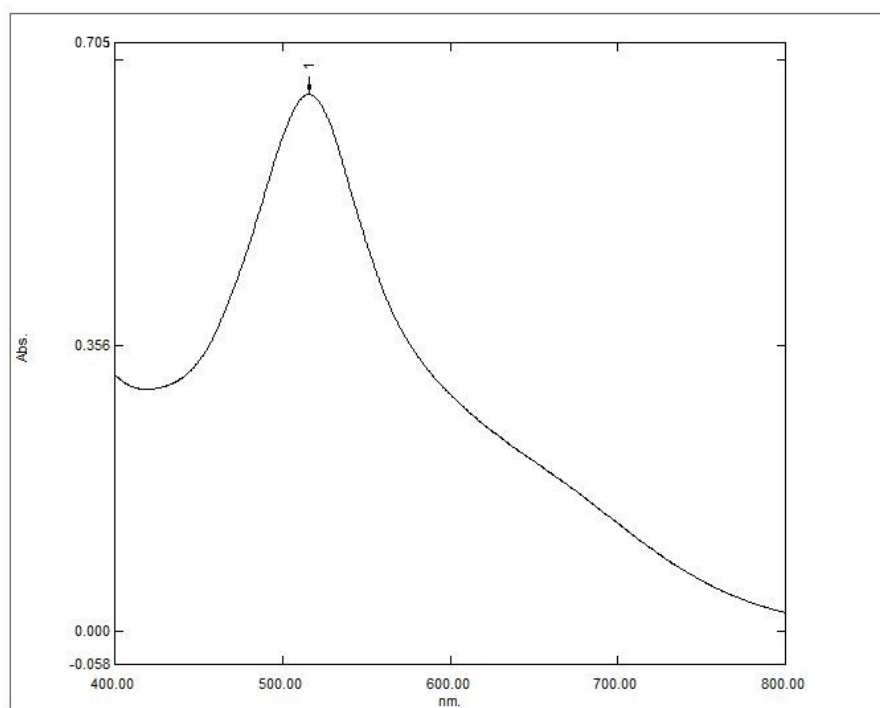
**Lampiran 10.** Hasil Pembacaan Absorbansi Senyawa Fenolik

Peak Pick				
No.	P/V	Wavelength nm.	Abs.	Description
1		344.50	2.545	
2		329.50	-0.073	
3		307.50	2.973	
4		288.50	0.766	
5		278.50	0.943	
6		255.50	1.843	
7		245.00	3.002	
8		212.00	0.364	

**Lampiran 11.** Spektrum UV-Vis Hasil Analisis Senyawa Fenolik

**Lampiran 12.** Data Panjang Gelombang Maksimum ( $\lambda_{maks}$ ) Larutan DPPH

Peak Pick				
No.	P/V	Wavelength nm.	Abs.	Description
1		516.00	0.660	

**Lampiran 13.** Spektrum UV-Vis Penentuan Panjang Gelombang Maksimum ( $\lambda_{maks}$ ) Larutan DPPH

**Lampiran 14.** Hasil Pengukuran Absorbansi Blanko DPPH dan Vitamin C sebagai Standar dengan Spektrofotometer UV-Vis

Standard Table							
	Sample ID	Type	Ex	Conc	WL516.0	Wgt.Factor	Comments
1	Blanko 20 ppm	Std-Repeat		20.000	0.660	1.000	
2	Blanko 20 ppm-2	Std-Repeat		20.000	0.660	1.000	
3	Blanko 20 ppm-3	Std-Repeat		20.000	0.660	1.000	
4	Blanko 20 ppm-Avg	Average		20.000	0.660	1.000	Avg of preceding 3 Samples
5	Vit c 1 ppm	Std-Repeat		1.000	0.494	1.000	
6	Vit c 1 ppm-2	Std-Repeat		1.000	0.494	1.000	
7	Vit c 1 ppm-3	Std-Repeat		1.000	0.494	1.000	
8	Vit c 1 ppm-Avg	Average		1.000	0.494	1.000	Avg of preceding 3 Samples
9	Vit c 2 ppm	Std-Repeat		2.000	0.360	1.000	
10	Vit c 2 ppm-2	Std-Repeat		2.000	0.360	1.000	
11	Vit c 2 ppm-3	Std-Repeat		2.000	0.360	1.000	
12	Vit c 2 ppm-Avg	Average		2.000	0.360	1.000	Avg of preceding 3 Samples
13	Vit c 2,5 ppm	Std-Repeat		2.500	0.359	1.000	
14	Vit c 2,5 ppm-2	Std-Repeat		2.500	0.359	1.000	
15	Vit c 2,5 ppm-3	Std-Repeat		2.500	0.359	1.000	
16	Vit c 2,5 ppm-Avg	Average		2.500	0.359	1.000	Avg of preceding 3 Samples
17	Vit c 5 ppm	Std-Repeat		5.000	0.252	1.000	
18	Vit c 5 ppm-2	Std-Repeat		5.000	0.252	1.000	
19	Vit c 5 ppm-3	Std-Repeat		5.000	0.252	1.000	
20	Vit c 5 ppm-Avg	Average		5.000	0.252	1.000	Avg of preceding 3 Samples
21	vit c 7 ppm	Std-Repeat		7.000	0.199	1.000	
23	vit c 7 ppm-3	Std-Repeat		7.000	0.199	1.000	
24	vit c 7 ppm-Avg	Average		7.000	0.199	1.000	Avg of preceding 3 Samples

**Lampiran 15.** Hasil Pengukuran Absorbansi Sampel 1 Fraksi Daun Setebal Spektrofotometer UV-Vis

Sample Table - ( Active )							
	Sample ID	Type	Ex	Conc	WL516.0	Comments	
21	Sampel 1_1 ppm	Unk-Repeat			0.441		
22	Sampel 1_1 ppm-2	Unk-Repeat			0.441		
23	Sampel 1_1 ppm-3	Unk-Repeat			0.441		
24	Sampel 1_1 ppm-Avg	Average		2.160	0.441	Avg of preceding 3 Samples	
25	Sampel 1_2 ppm	Unk-Repeat			0.428		
26	Sampel 1_2 ppm-2	Unk-Repeat			0.428		
27	Sampel 1_2 ppm-3	Unk-Repeat			0.428		
28	Sampel 1_2 ppm-Avg	Average		4.019	0.428	Avg of preceding 3 Samples	
29	Sampel 1_2,5 ppm	Unk-Repeat			0.403		
30	Sampel 1_2,5 ppm-2	Unk-Repeat			0.403		
31	Sampel 1_2,5 ppm-3	Unk-Repeat			0.403		
32	Sampel 1_2,5 ppm-Avg	Average		10.488	0.403	Avg of preceding 3 Samples	
33	Sampel 1_5 ppm	Unk-Repeat			0.391		
34	Sampel 1_5 ppm-2	Unk-Repeat			0.391		
35	Sampel 1_5 ppm-3	Unk-Repeat			0.391		
36	Sampel 1_5 ppm-Avg	Average		14.711	0.391	Avg of preceding 3 Samples	
37	Sampel 1_7 ppm	Unk-Repeat			0.388		
38	Sampel 1_7 ppm-2	Unk-Repeat			0.388		
39	Sampel 1_7 ppm-3	Unk-Repeat			0.388		
40	Sampel 1_7 ppm-Avg	Average		16.636	0.388	Avg of preceding 3 Samples	

**Lampiran 16.** Hasil Pengukuran Absorbansi Sampel 2 Fraksi Daun Setebal Spektrofotometer UV-Vis

Sample Table - ( Active )						
	Sample ID	Type	Ex	Conc	WL516.0	Comments
101	Sampel 2_1 ppm	Unk-Repeat			0.318	
102	Sampel 2_1 ppm-2	Unk-Repeat			0.319	
103	Sampel 2_1 ppm-3	Unk-Repeat			0.318	
104	Sampel 2_1 ppm-Avg	Average		1.207	0.319	Avg of preceding 3 Samples
105	Sampel 2_2 ppm	Unk-Repeat			0.316	
106	Sampel 2_2 ppm-2	Unk-Repeat			0.316	
107	Sampel 2_2 ppm-3	Unk-Repeat			0.316	
108	Sampel 2_2 ppm-Avg	Average		1.037	0.316	Avg of preceding 3 Samples
109	Sampel 2_2,5 ppm	Unk-Repeat			0.284	
110	Sampel 2_2,5 ppm-2	Unk-Repeat			0.284	
111	Sampel 2_2,5 ppm-3	Unk-Repeat			0.284	
112	Sampel 2_2,5 ppm-Avg	Average		1.331	0.284	Avg of preceding 3 Samples
113	Sampel 2_5 ppm	Unk-Repeat			0.251	
114	Sampel 2_5 ppm-2	Unk-Repeat			0.251	
115	Sampel 2_5 ppm-3	Unk-Repeat			0.251	
116	Sampel 2_5 ppm-Avg	Average		3.733	0.251	Avg of preceding 3 Samples
117	Sampel 2_7 ppm	Unk-Repeat			0.144	
118	Sampel 2_7 ppm-2	Unk-Repeat			0.145	
119	Sampel 2_7 ppm-3	Unk-Repeat			0.145	
120	Sampel 2_7 ppm-Avg	Average		11.493	0.144	Avg of preceding 3 Samples

**Lampiran 17.** Hasil Pengukuran Absorbansi Sampel 3 Fraksi Daun Setebal Spektrofotometer UV-Vis

Sample Table - ( Active )						
	Sample ID	Type	Ex	Conc	WL516.0	Comments
41	Sampel 3_1 ppm	Unk-Repeat			0.472	
42	Sampel 3_1 ppm-2	Unk-Repeat			0.472	
43	Sampel 3_1 ppm-3	Unk-Repeat			0.472	
44	Sampel 3_1 ppm-Avg	Average		2.261	0.472	Avg of preceding 3 Samples
45	Sampel 3_2 ppm	Unk-Repeat			0.461	
46	Sampel 3_2 ppm-2	Unk-Repeat			0.461	
47	Sampel 3_2 ppm-3	Unk-Repeat			0.461	
48	Sampel 3_2 ppm-Avg	Average		3.966	0.461	Avg of preceding 3 Samples
49	Sampel 3_2,5 ppm	Unk-Repeat			0.452	
50	Sampel 3_2,5 ppm-2	Unk-Repeat			0.452	
51	Sampel 3_2,5 ppm-3	Unk-Repeat			0.452	
52	Sampel 3_2,5 ppm-Avg	Average		7.334	0.452	Avg of preceding 3 Samples
53	Sampel 3_5 ppm	Unk-Repeat			0.389	
54	Sampel 3_5 ppm-2	Unk-Repeat			0.389	
55	Sampel 3_5 ppm-3	Unk-Repeat			0.389	
56	Sampel 3_5 ppm-Avg	Average		11.032	0.389	Avg of preceding 3 Samples
57	Sampel 3_7 ppm	Unk-Repeat			0.384	
58	Sampel 3_7 ppm-2	Unk-Repeat			0.384	
59	Sampel 3_7 ppm-3	Unk-Repeat			0.384	
60	Sampel 3_7 ppm-Avg	Average		14.610	0.384	Avg of preceding 3 Samples

**Lampiran 18.** Hasil Pengukuran Absorbansi Sampel 4 Fraksi Daun Setebal Spektrofotometer UV-Vis

Sample Table - [ Active ]						
	Sample ID	Type	Ex	Conc	WL516.0	Comments
1	Sampel 4_1 ppm	Unk-Repeat			0.450	
2	Sampel 4_1 ppm-2	Unk-Repeat			0.450	
3	Sampel 4_1 ppm-3	Unk-Repeat			0.450	
4	Sampel 4_1 ppm-Avg	Average		0.148	0.450	Avg of preceding 3 Samples
5	Sampel 4_2 ppm	Unk-Repeat			0.436	
6	Sampel 4_2 ppm-2	Unk-Repeat			0.436	
7	Sampel 4_2 ppm-3	Unk-Repeat			0.436	
8	Sampel 4_2 ppm-Avg	Average		0.496	0.436	Avg of preceding 3 Samples
9	Sampel 4_2,5 ppm	Unk-Repeat			0.416	
10	Sampel 4_2,5 ppm-2	Unk-Repeat			0.416	
11	Sampel 4_2,5 ppm-3	Unk-Repeat			0.416	
12	Sampel 4_2,5 ppm-Avg	Average		0.888	0.416	Avg of preceding 3 Samples
13	Sampel 4_5 ppm	Unk-Repeat			0.398	
14	Sampel 4_5 ppm-2	Unk-Repeat			0.398	
15	Sampel 4_5 ppm-3	Unk-Repeat			0.398	
16	Sampel 4_5 ppm-Avg	Average		0.572	0.398	Avg of preceding 3 Samples
17	Sampel 4_7 ppm	Unk-Repeat			0.378	
18	Sampel 4_7 ppm-2	Unk-Repeat			0.378	
19	Sampel 4_7 ppm-3	Unk-Repeat			0.378	
20	Sampel 4_7 ppm-Avg	Average		2.206	0.378	Avg of preceding 3 Samples

**Lampiran 19.** Perhitungan % Rendemen

Berat awal serbuk : 2.100 gram

Berat akhir ekstrak : 345 gram

$$\% \text{ Rendeman} = \frac{\text{Berat Akhir}}{\text{Berat Awal}} \times 100\%$$

$$\% \text{ Rendeman} = \frac{345 \text{ gram}}{2.100 \text{ gram}} \times 100\% = 16,42 \%$$

**Lampiran 20.** Perhitungan Pembuatan Larutan DPPH**1. Pembuatan Larutan DPPH**

## 1.1 Larutan Induk DPPH

$$\frac{20 \text{ mg}}{100 \text{ mL}} = \frac{20 \text{ mg}}{0,1L} = 200 \text{ ppm}$$

## 1.2 Larutan Blanko DPPH 20 ppm dalam 10 mL

$$\text{Ppm}_1 \times V_1 = \text{ppm}_2 \times V_2$$

$$200 \text{ ppm} \times V_1 = 20 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{20 \times 10}{200} = 1\text{mL dalam } 10\text{mL etanol } 96\%$$

**2. Pembuatan Larutan Pembanding Vitamin C**

## 2.1 Larutan Induk Vitamin C

$$\frac{20 \text{ mg}}{50 \text{ mL}} = \frac{20 \text{ mg}}{0,05L} = 400 \text{ ppm}$$

## 2.2 Larutan Blanko Vitamin C 100 ppm

$$\text{Ppm}_1 \times V_1 = \text{ppm}_2 \times V_2$$

$$400 \text{ ppm} \times V_1 = 100 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{100 \times 10}{400} = 2,5\text{mL dalam } 10\text{mL etanol } 96\%$$

### 2.3 Larutan Seri Konsentrasi Vitamin C 1 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 1 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{1 \times 10}{100} = 0,1\text{mL dalam } 10\text{mL etanol } 96\%$$

### 2.4 Larutan Seri Konsentrasi Vitamin C 2 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 2 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{2 \times 10}{100} = 0,2\text{mL dalam } 10\text{mL etanol } 96\%$$

### 2.5 Larutan Seri Konsentrasi Vitamin C 2,5 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 2,5 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{2,5 \times 10}{100} = 0,25\text{mL dalam } 10\text{mL etanol } 96\%$$

### 2.6 Larutan Seri Konsentrasi Vitamin C 5 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 5 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{5 \times 10}{100} = 0,5\text{mL dalam } 10\text{mL etanol } 96\%$$

### 2.7 Larutan Seri Konsentrasi Vitamin C 7 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 7 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{7 \times 10}{100} = 0,7\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3. Pembuatan Larutan Sampel

### 3.1 Larutan Induk Sampel

$$\frac{20 \text{ mg}}{50 \text{ mL}} = \frac{20 \text{ mg}}{0,05\text{L}} = 400 \text{ ppm}$$

## 3.2 Larutan Blanko Sampel 100 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$400 \text{ ppm} \times V_1 = 100 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{100 \times 10}{400} = 2,5\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3.3 Larutan Seri Konsentrasi Sampel 1 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 1 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{1 \times 10}{100} = 0,1\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3.4 Larutan Seri Konsentrasi Sampel 2 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 2 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{2 \times 10}{100} = 0,2\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3.5 Larutan Seri Konsentrasi Sampel 2,5 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 2,5 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{2,5 \times 10}{100} = 0,25\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3.6 Larutan Seri Konsentrasi Sampel 5 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 5 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{5 \times 10}{100} = 0,5\text{mL dalam } 10\text{mL etanol } 96\%$$

## 3.7 Larutan Seri Konsentrasi Sampel 7 ppm

$$Ppm_1 \times V_1 = ppm_2 \times V_2$$

$$100 \text{ ppm} \times V_1 = 7 \text{ ppm} \times 10\text{mL}$$

$$V_1 = \frac{7 \times 10}{100} = 0,7\text{mL dalam } 10\text{mL etanol } 96\%$$

**Lampiran 21.** Hasil Uji Antioksidan Vitamin C (Pembanding)

Konsentrasi (ppm)	Absorbansi Sampel			Rata-rata	Absorbansi Blanko	% Inhibisi	IC <sub>50</sub> (ppm)
	1	2	3				
1	0,494	0,494	0,494	0,494	0,660	25,152	3,563
2	0,360	0,360	0,360	0,360		45,455	
2,5	0,359	0,359	0,359	0,359		45,606	
5	0,252	0,252	0,252	0,252		61,818	
7	0,199	0,199	0,199	0,199		69,848	

## Persamaan Regresi Linear

$$y = 6,6888x + 26,165$$

$$R^2 = 0,9022$$

## Perhitungan % Inhibisi Vitamin C

$$\% \text{ Inhibisi} = \frac{\text{Abs.Kontrol (DPPH)} - \text{Abs.Sampel}}{\text{Abs.Kontrol (DPPH)}} \times 100\%$$

$$\% \text{ Inhibisi 1 ppm} = \frac{0,660 - 0,494}{0,660} \times 100\%$$

$$= 25,152$$

$$\% \text{ Inhibisi 2 ppm} = \frac{0,660 - 0,360}{0,660} \times 100\%$$

$$= 45,455$$

$$\% \text{ Inhibisi 2,5 ppm} = \frac{0,660 - 0,359}{0,660} \times 100\%$$

$$= 45,606$$

$$\% \text{ Inhibisi 5 ppm} = \frac{0,660 - 0,252}{0,660} \times 100\%$$

$$= 61,818$$

$$\% \text{ Inhibisi 7 ppm} = \frac{0,660 - 0,199}{0,660} \times 100\%$$

$$= 69,848$$

Perhitungan IC<sub>50</sub> Vitamin C

$$y = ax \pm b, y = \text{IC}_{50} = 50$$

$$y = 6,6888x - 26,165$$

$$x = \frac{(50 - 26,165)}{6,6888} = 3,563 \text{ ppm}$$

**Lampiran 22.** Hasil Uji Antioksidan Sampel 1 Fraksi Daun Setebal

Konsentrasi (ppm)	Absorbansi Sampel			Rata-rata	Absorbansi Blanko	% Inhibisi	IC <sub>50</sub> (ppm)
	1	2	3				
1	0,441	0,441	0,441	0,441	0,660	33,182	12,981
2	0,428	0,428	0,428	0,428			
2,5	0,403	0,403	0,403	0,403			
5	0,391	0,391	0,391	0,391			
7	0,388	0,388	0,388	0,388			

Persamaan Regresi Linear

$$y = 1,2816x + 33,363$$

$$R^2 = 0,7881$$

Perhitungan % Inhibisi Sampel 1 Fraksi Daun Setebal

$$\% \text{ Inhibisi} = \frac{\text{Abs.Kontrol (DPPH)} - \text{Abs.Sampel}}{\text{Abs.Kontrol (DPPH)}} \times 100\%$$

$$\% \text{ Inhibisi 1 ppm} = \frac{0,660 - 0,441}{0,660} \times 100\%$$

$$= 33,182$$

$$\% \text{ Inhibisi 2 ppm} = \frac{0,660 - 0,424}{0,660} \times 100\%$$

$$= 35,152$$

$$\% \text{ Inhibisi 2,5 ppm} = \frac{0,660 - 0,403}{0,660} \times 100\%$$

$$= 38,939$$

$$\% \text{ Inhibisi 5 ppm} = \frac{0,660 - 0,391}{0,660} \times 100\%$$

$$= 40,758$$

$$\% \text{ Inhibisi 7 ppm} = \frac{0,660 - 0,388}{0,660} \times 100\%$$

$$= 41,212$$

Perhitungan IC<sub>50</sub> Sampel 1 Fraksi Daun Setebal

$$y = ax \pm b, y = \text{IC}_{50} = 50$$

$$y = 1,2816x - 33,363$$

$$x = \frac{(50 - 33,363)}{1,2816} = 12,981 \text{ ppm}$$

**Lampiran 23.** Hasil Uji Antioksidan Sampel 2 Fraksi Daun Setebal

Konsentrasi (ppm)	Absorbansi Sampel			Rata-rata	Absorbansi Blanko	% Inhibisi	IC <sub>50</sub> (ppm)
	1	2	3				
1	0,319	0,319	0,319	0,319	0,660	51,667	5,159
2	0,316	0,316	0,316	0,316		52,121	
2,5	0,284	0,284	0,284	0,284		56,970	
5	0,251	0,251	0,251	0,251		61,970	
7	0,144	0,144	0,144	0,144		78,182	

Persamaan Regresi Linear

$$y = 4,2614x + 45,267$$

$$R^2 = 0,9175$$

Perhitungan % Inhibisi Sampel 2 Fraksi Daun Setebal

$$\% \text{ Inhibisi} = \frac{\text{Abs.Kontrol (DPPH)} - \text{Abs.Sampel}}{\text{Abs.Kontrol (DPPH)}} \times 100\%$$

$$\% \text{ Inhibisi 1 ppm} = \frac{0,660 - 0,319}{0,660} \times 100\%$$

$$= 51,667$$

$$\% \text{ Inhibisi 2 ppm} = \frac{0,660 - 0,316}{0,660} \times 100\%$$

$$= 52,121$$

$$\% \text{ Inhibisi 2,5 ppm} = \frac{0,660 - 0,284}{0,660} \times 100\%$$

$$= 56,970$$

$$\% \text{ Inhibisi 5 ppm} = \frac{0,660 - 0,251}{0,660} \times 100\%$$

$$= 61,970$$

$$\% \text{ Inhibisi 7 ppm} = \frac{0,660 - 0,144}{0,660} \times 100\%$$

$$= 78,182$$

Perhitungan IC<sub>50</sub> Sampel 2 Fraksi Daun Setebal

$$y = ax \pm b, y = \text{IC}_{50} = 50$$

$$y = 4,2614x - 45,267$$

$$x = \frac{(50 - 45,267)}{4,2614} = 5,159 \text{ ppm}$$

**Lampiran 24.** Hasil Uji Antioksidan Sampel 3 Fraksi Daun Setebal

Konsentrasi (ppm)	Absorbansi Sampel			Rata-rata	Absorbansi Blanko	% Inhibisi	IC <sub>50</sub> (ppm)
	1	2	3				
1	0,472	0,472	0,472	0,472	0,660	28,485	9,658
2	0,461	0,461	0,461	0,461		30,152	
2,5	0,452	0,452	0,452	0,452		31,515	
5	0,389	0,389	0,389	0,389		41,061	
7	0,384	0,384	0,384	0,384		41,818	

Persamaan Regresi Linear

$$y = 2,5x + 25,856$$

$$R^2 = 0,9343$$

Perhitungan % Inhibisi Sampel 3 Fraksi Daun Setebal

$$\% \text{ Inhibisi} = \frac{\text{Abs.Kontrol (DPPH)} - \text{Abs.Sampel}}{\text{Abs.Kontrol (DPPH)}} \times 100\%$$

$$\% \text{ Inhibisi 1 ppm} = \frac{0,660 - 0,472}{0,660} \times 100\%$$

$$= 28,485$$

$$\% \text{ Inhibisi 2 ppm} = \frac{0,660 - 0,461}{0,660} \times 100\%$$

$$= 30,152$$

$$\% \text{ Inhibisi 2,5 ppm} = \frac{0,660 - 0,452}{0,660} \times 100\%$$

$$= 31,515$$

$$\% \text{ Inhibisi 5 ppm} = \frac{0,660 - 0,389}{0,660} \times 100\%$$

$$= 41,061$$

$$\% \text{ Inhibisi 7 ppm} = \frac{0,660 - 0,382}{0,660} \times 100\%$$

$$= 41,818$$

Perhitungan IC<sub>50</sub> Sampel 3 Fraksi Daun Setebal

$$y = ax \pm b, y = \text{IC}_{50} = 50$$

$$y = 2,5x - 25,856$$

$$x = \frac{(50 - 25,856)}{2,5} = 9,658 \text{ ppm}$$

**Lampiran 25.** Hasil Uji Antioksidan Sampel 4 Fraksi Daun Setebal

Konsentrasi (ppm)	Absorbansi Sampel			Rata-rata	Absorbansi Blanko	% Inhibisi	IC <sub>50</sub> (ppm)
	1	2	3				
1	0,450	0,450	0,450	0,450	0,660	31,818	10,971
2	0,436	0,436	0,436	0,436		33,939	
2,5	0,416	0,416	0,416	0,416		36,970	
5	0,398	0,398	0,398	0,398		39,697	
7	0,378	0,378	0,378	0,378		42,727	

Persamaan Regresi Linear

$$y = 1,7361x + 30,954$$

$$R^2 = 0,9482$$

Perhitungan % Inhibisi Sampel 4 Fraksi Daun Setebal

$$\% \text{ Inhibisi} = \frac{\text{Abs.Kontrol (DPPH)} - \text{Abs.Sampel}}{\text{Abs.Kontrol (DPPH)}} \times 100\%$$

$$\% \text{ Inhibisi 1 ppm} = \frac{0,660 - 0,450}{0,660} \times 100\%$$

$$= 31,818$$

$$\% \text{ Inhibisi 2 ppm} = \frac{0,660 - 0,436}{0,660} \times 100\%$$

$$= 33,939$$

$$\% \text{ Inhibisi 2,5 ppm} = \frac{0,660 - 0,416}{0,660} \times 100\%$$

$$= 36,970$$

$$\% \text{ Inhibisi 5 ppm} = \frac{0,660 - 0,398}{0,660} \times 100\%$$

$$= 39,697$$

$$\% \text{ Inhibisi 7 ppm} = \frac{0,660 - 0,378}{0,660} \times 100\%$$

$$= 42,727$$

Perhitungan IC<sub>50</sub> Sampel 4 Fraksi Daun Setebal

$$y = ax \pm b, y = \text{IC}_{50} = 50$$

$$y = 1,7361x - 30,954$$

$$x = \frac{(50 - 30,954)}{1,7361} = 10,971 \text{ ppm}$$