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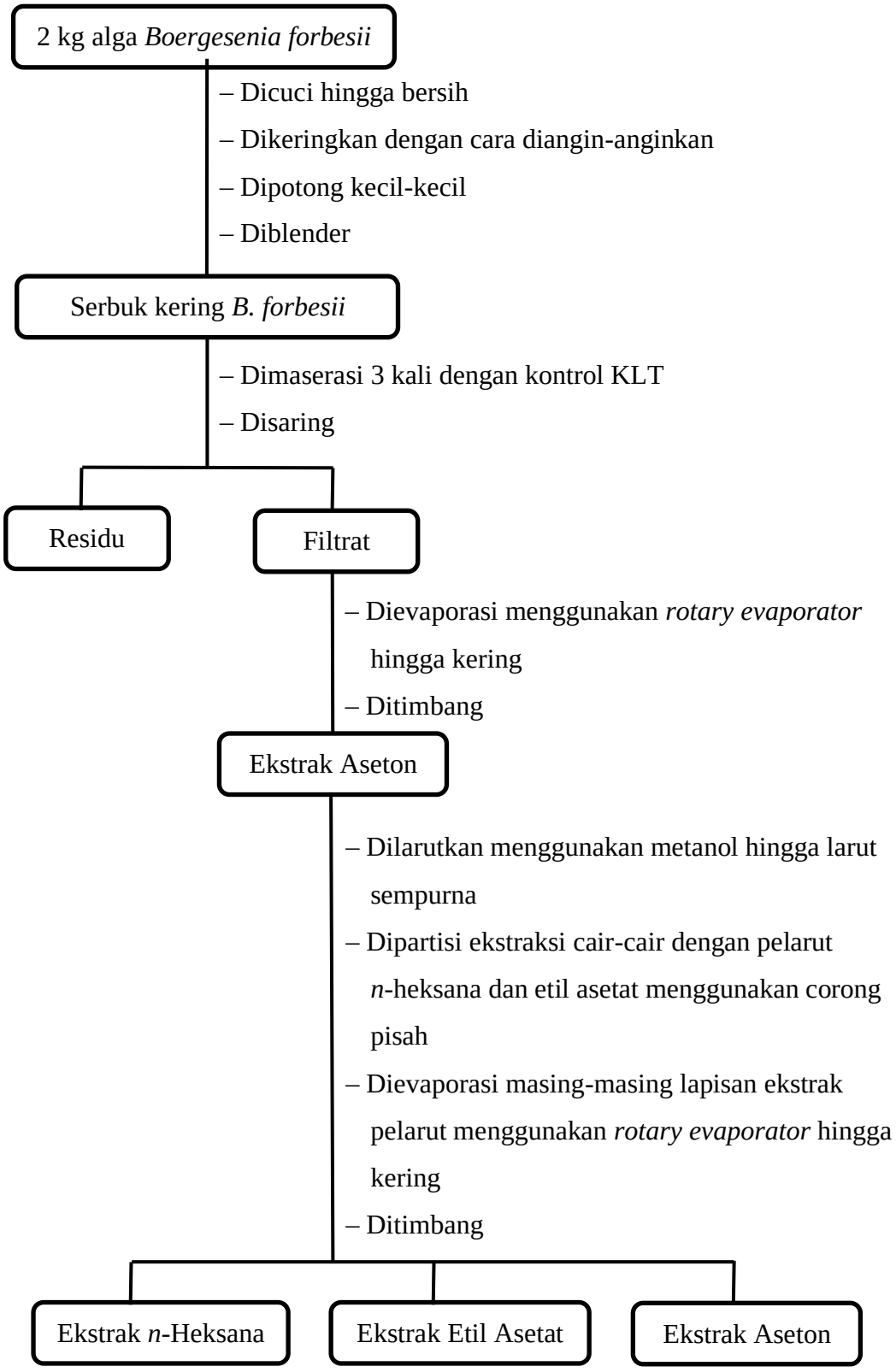
Lampiran 1. Bagan Kerja

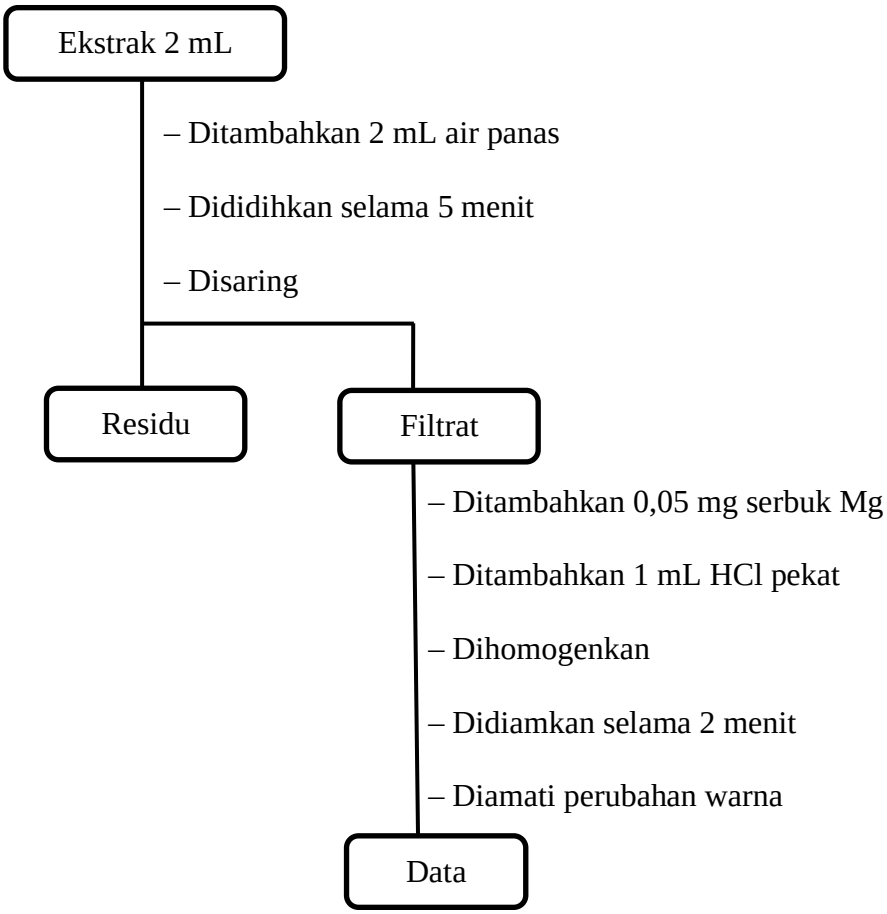
1.1 Ekstraksi Sampel



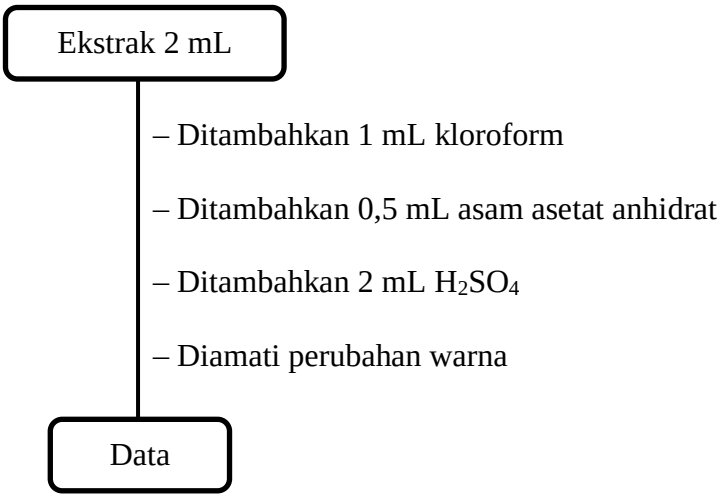
1.2 Identifikasi Golongan Senyawa Kimia pada Ekstrak

a. Uji Fenolik

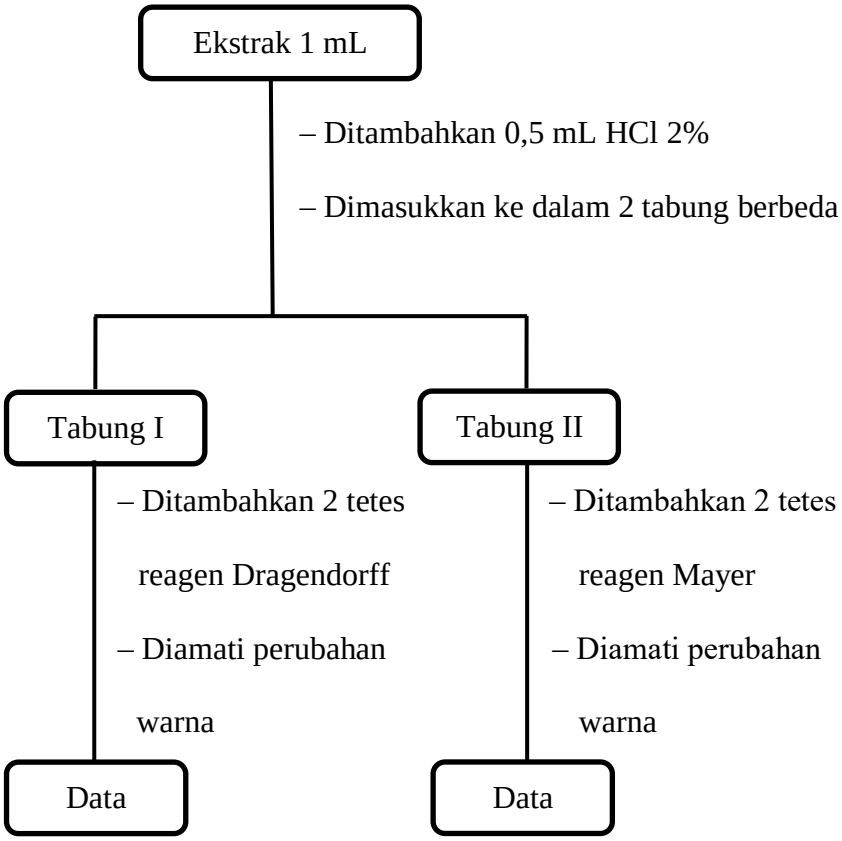
b. Uji Flavonoid



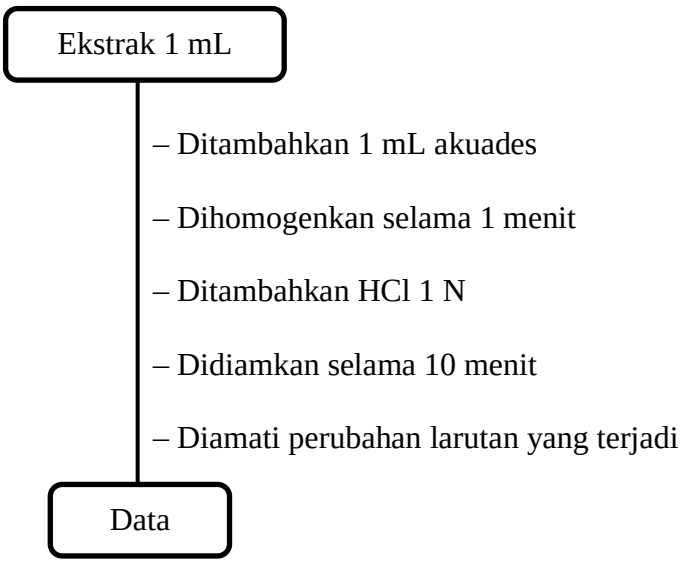
c. Uji Terpenoid/Steroid



d. Uji Alkaloid

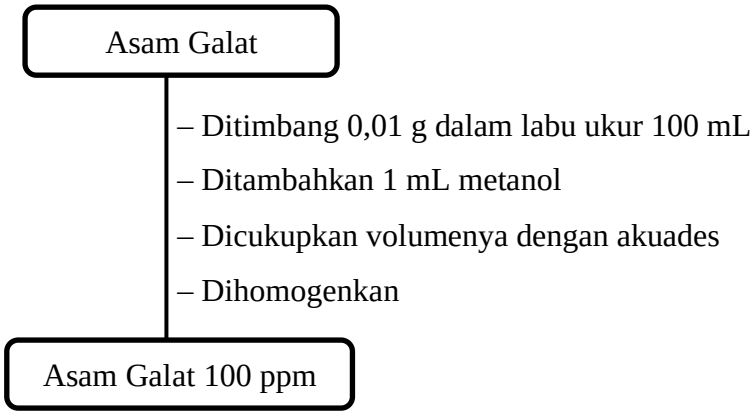


e. Uji Saponin

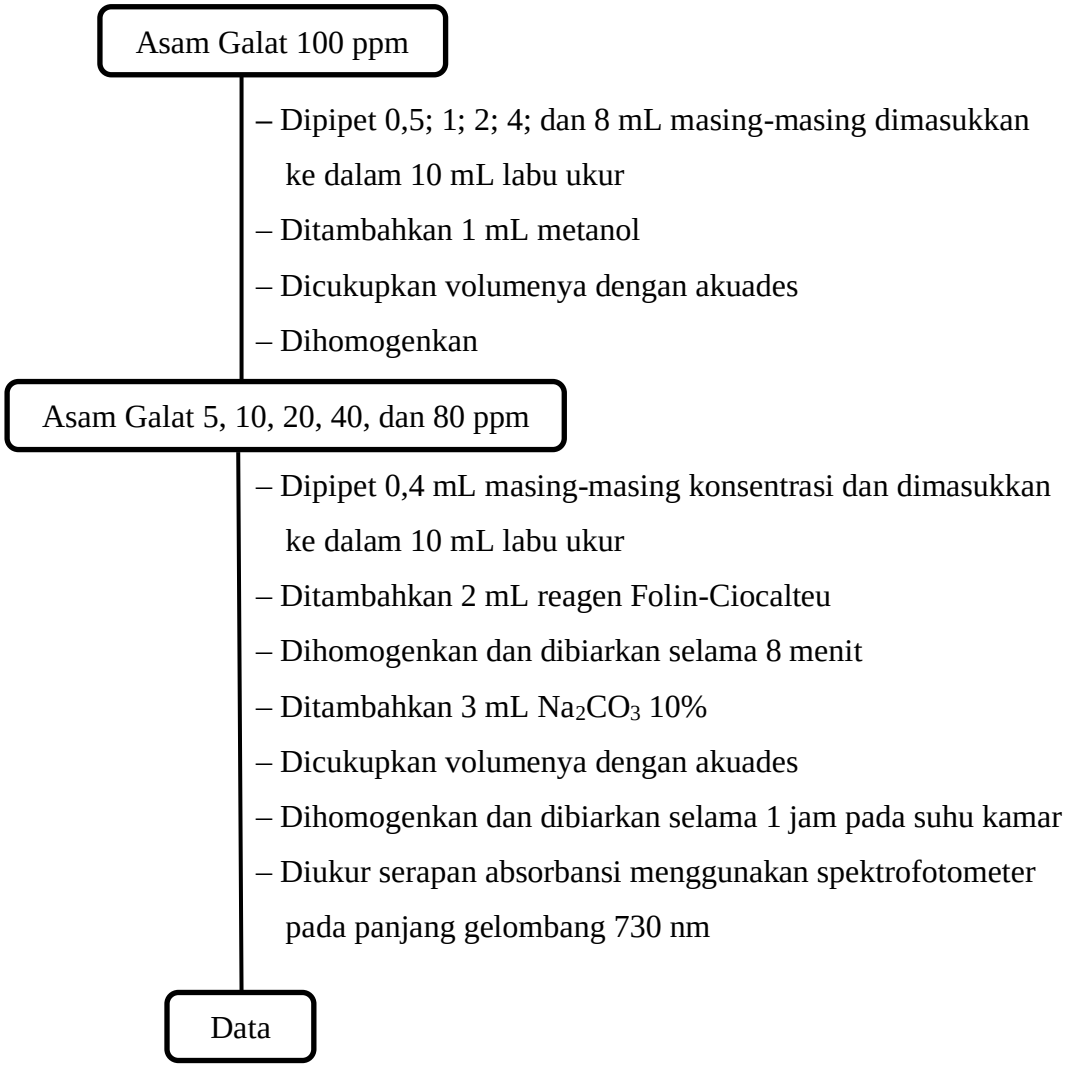


1.3 Kadar Fenol Total

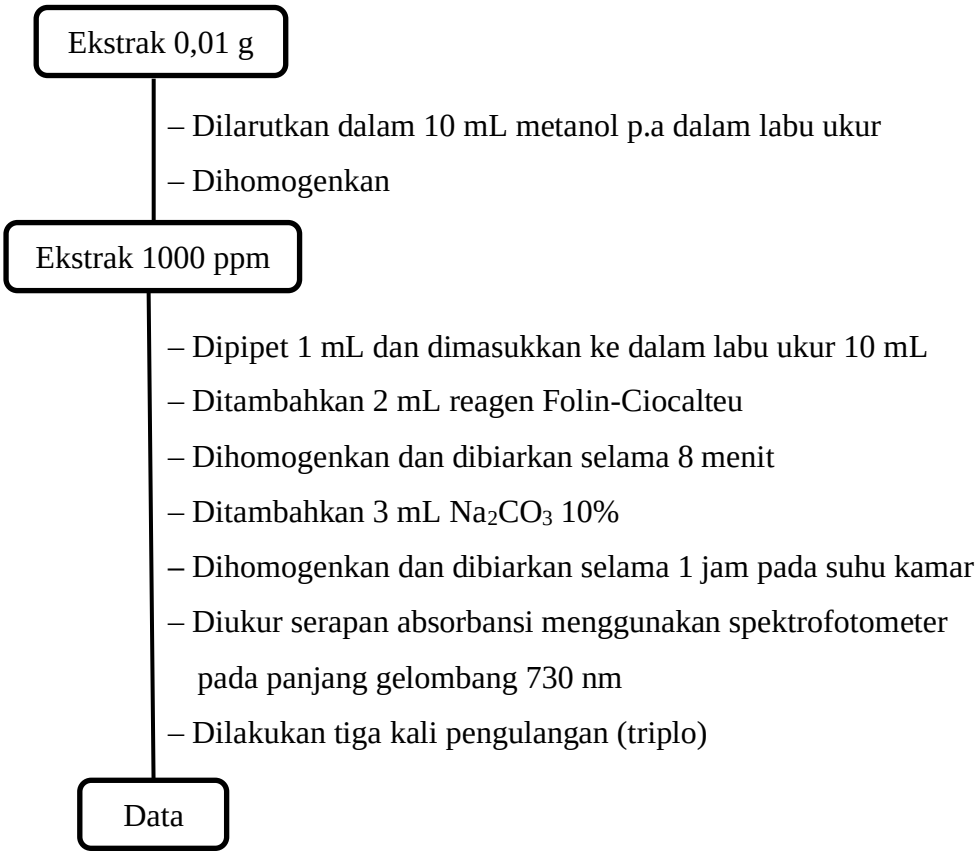
a. Pembuatan Larutan Induk Asam Galat 100 ppm



b. Pembuatan Larutan Pembanding Asam Galat

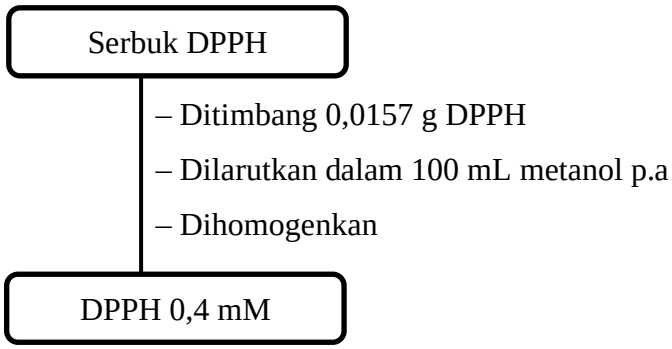


c. Penentuan Kadar Fenol Total Ekstrak

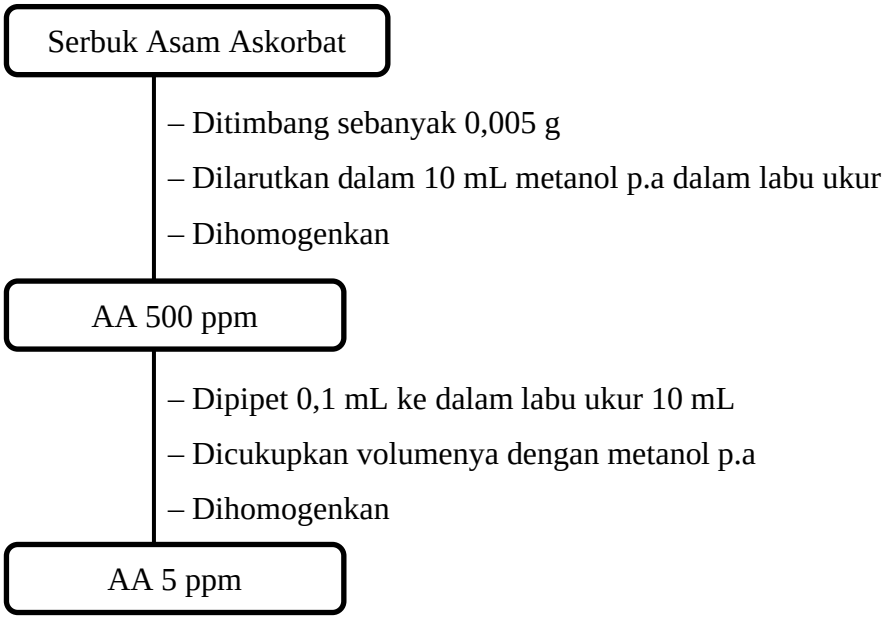


1.4 Aktivitas Antioksidan Sampel

a. Pembuatan Larutan DPPH 0,4 mM



b. Pembuatan Larutan Induk Asam Askorbat



AA 5 ppm

– Dipipet secara berturut-turut sebanyak 0,25; 0,5; 1; 2; dan 4 mL ke dalam labu ukur 5 mL
– Ditambahkan 1 mL larutan DPPH 0,4 mM
– Dicukupkan volumenya dengan metanol p.a
– Dihomogenkan

AA 0,25; 0,5; 1; 2; dan 4 ppm

– Diinkubasi selama 30 menit pada suhu 37°C
– Diukur serapan absorbansi dengan menggunakan spektrofotometer pada panjang gelombang 517 nm

Data

c. Pengujian Aktivitas Antioksidan

Sampel kering 0,01 g

– Dilarutkan dalam 10 mL metanol p.a
– Dihomogenkan

Sampel 1000 ppm

– Dipipet 0,2; 0,4; 0,8; 1,6; dan 3,2 mL dalam labu ukur 5 mL
– Ditambahkan masing-masing 1 mL larutan DPPH 0,4 mM
– Dicukupkan volumenya dengan metanol p.a
– Dihomogenkan

Sampel 40; 80; 160; 320; dan 640 ppm

– Diinkubasi selama 30 menit pada suhu 37°C
– Diukur serapan absorbansi dengan menggunakan spektrofotometer pada panjang gelombang 517 nm

Data

Lampiran 2. Perhitungan

2.1 Rendemen Ekstrak

Bobot simplisia = 2 kg = 2000 gram

$$\% \text{ Rendemen} = \frac{\text{bobot ekstrak (g)}}{\text{bobot simplisia (g)}} \times 100\%$$

2.1.1 n-Heksana

Bobot ekstrak n-heksana = 1,5221 gram

$$\% \text{ Rendemen} = \frac{1{,}5521 \text{ g}}{2000 \text{ g}} \times 100\% = 0{,}0761\%$$

2.1.2 Etil Asetat

Bobot ekstrak etil asetat = 3,9583 gram

$$\% \text{ Rendemen} = \frac{3{,}9583 \text{ g}}{2000 \text{ g}} \times 100\% = 0{,}1979\%$$

2.1.3 Aseton

Bobot ekstrak aseton = 2,3242 gram

$$\% \text{ Rendemen} = \frac{2{,}3242 \text{ g}}{2000 \text{ g}} \times 100\% = 0{,}1162\%$$

2.2 Kadar Fenol Total

2.2.1 Kurva Kalibrasi Asam Galat

Kurva Kalibrasi Asam Galat Replikasi 1

No.	Konsentrasi asam galat (ppm) [X]	Absorbansi [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	1	0,098	1	0,009604	0,098
2.	2	0,236	4	0,055696	0,472
3.	4	0,455	16	0,207025	1,820
4.	8	0,682	64	0,465124	5,456
5.	16	1,388	256	1,926544	22,208
SUM	31	2,859	341	2,663993	30,054

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

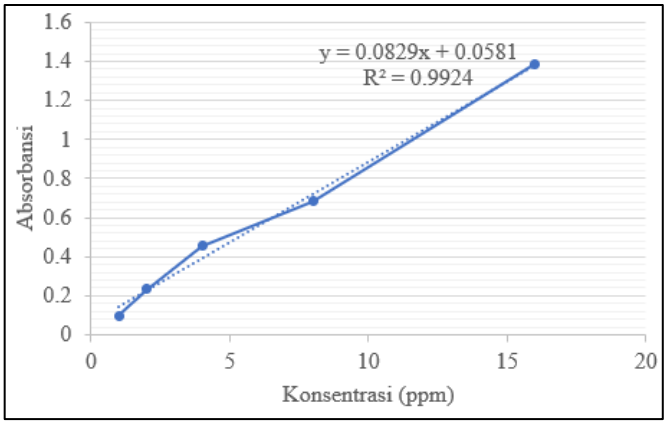
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(2{,}859)(341) - (31)(30{,}054)}{(5)(341) - (31)^2} = 0{,}0581$$

$$b = \frac{(5)(30{,}054) - (31)(2{,}859)}{(5)(341) - (31)^2} = 0{,}0829$$

$$r = \frac{(5)(30{,}054) - (31)(2{,}859)}{\sqrt{[(5)(341) - (31)^2][(5)(2{,}663993) - (2{,}859)^2]}} = 0{,}9961$$

$$r^2 = (0{,}9961)^2 = 0{,}9924$$



Kurva Kalibrasi Asam Galat Replikasi 2

No.	Konsentrasi asam galat (ppm) [X]	Absorbansi [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	1	0,105	1	0,011025	0,105
2.	2	0,238	4	0,056644	0,476
3.	4	0,461	16	0,212521	1,844
4.	8	0,682	64	0,465124	5,456
5.	16	1,387	256	1,923769	22,192
SUM	31	2,873	341	2,669083	30,073

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

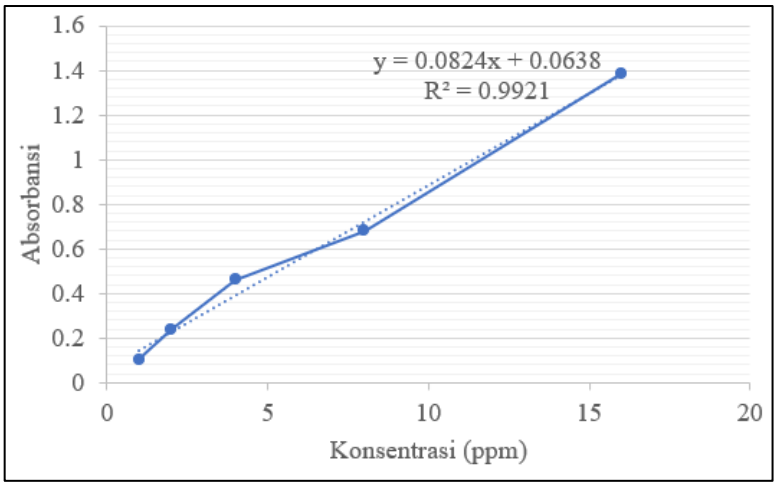
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(2{,}873)(341) - (31)(30{,}073)}{(5)(341) - (31)^2} = 0{,}0638$$

$$b = \frac{(5)(30{,}073) - (31)(2{,}873)}{(5)(341) - (31)^2} = 0{,}0824$$

$$r = \frac{(5)(30{,}073) - (31)(2{,}873)}{\sqrt{[(5)(341) - (31)^2][(5)(2{,}669083) - (2{,}873)^2]}} = 0{,}9960$$

$$r^2 = (0{,}9960)^2 = 0{,}9921$$



Kurva Kalibrasi Asam Galat Replikasi 3

No.	Konsentrasi asam galat (ppm) [X]	Absorbansi [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	1	0,093	1	0,008649	0,093
2.	2	0,235	4	0,055225	0,470
3.	4	0,443	16	0,196249	1,772
4.	8	0,688	64	0,473344	5,504
5.	16	1,392	256	1,937664	22,272
SUM	31	2,851	341	2,671131	30,111

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

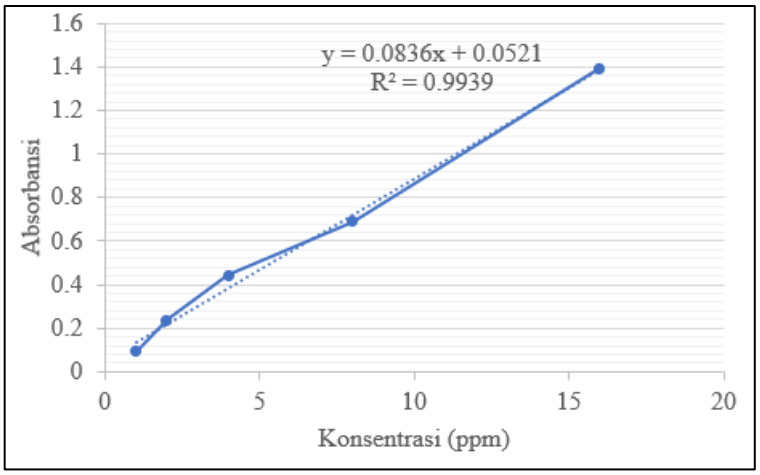
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(2{,}851)(341) - (31)(30{,}111)}{(5)(341) - (31)^2} = 0{,}0521$$

$$b = \frac{(5)(30{,}111) - (31)(2{,}851)}{(5)(341) - (31)^2} = 0{,}0836$$

$$r = \frac{(5)(30{,}111) - (31)(2{,}851)}{\sqrt{[(5)(341) - (31)^2][(5)(2{,}671131) - (2{,}851)^2]}} = 0{,}9970$$

$$r^2 = (0{,}9970)^2 = 0{,}9939$$



Data absorbansi standar asam galat

Replikasi	Konsentrasi asam galat (ppm)	Absorbansi	Persamaan regresi linear
1	1	0,098	y = 0,0829x + 0,0581 R^2 = 0.9924
	2	0,236	
	4	0,455	
	8	0,682	
	16	1,388	
2	1	0,105	y = 0,0824x + 0,0638 R^2 = 0.9921
	2	0,238	
	4	0,461	
	8	0,682	
	16	1,387	
3	1	0,093	y = 0,0836x + 0,0521 R^2 = 0.9939
	2	0,235	
	4	0,443	
	8	0,688	
	16	1,392	

2.2.2 Perhitungan Kadar Fenol Total Ekstrak Alga *B. forbesii*

Persamaan regresi kurva kalibrasi asam galat yang digunakan adalah:

$y = 0{,}0836x + 0{,}0521$

$$x = \frac{y - 0{,}0521}{0{,}0836}$$

Total fenol ekuivalen asam galat = mg GAE/g ekstrak = $C \times V \times fp \times \frac{1}{g}$

Keterangan: C = kadar fenol total (nilai x) satuan ppm (mg/L)

V = volume ekstrak digunakan (mL)

fp = faktor pengenceran

g = berat sampel yang digunakan (gram)

2.2.2.1 *n*-Heksana

$$x_1 = \frac{0{,}262 - 0{,}0521}{0{,}0836} = 2{,}5108 \text{ ppm}$$

$$= \frac{2{,}5108 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}25108 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_2 = \frac{0{,}265 - 0{,}0521}{0{,}0836} = 2{,}5467 \text{ ppm}$$

$$= \frac{2{,}5467 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}25467 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_3 = \frac{0{,}267 - 0{,}0521}{0{,}0836} = 2{,}5706$$

$$= \frac{2{,}5706 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}25706 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x = \frac{0{,}25108 + 0{,}25467 + 0{,}25706}{3} = 0{,}25427 \text{ mg GAE/g ekstrak}$$

2.2.2.2 Etil Asetat

$$x_1 = \frac{0{,}284 - 0{,}0521}{0{,}0836} = 2{,}7739$$

$$= \frac{2{,}7739 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}27739 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_2 = \frac{0{,}279 - 0{,}0521}{0{,}0836} = 2{,}7141$$

$$= \frac{2{,}7141 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}27141 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_3 = \frac{0{,}283 - 0{,}0521}{0{,}0836} = 2{,}7620$$

$$= \frac{2{,}7620 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}27620 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x = \frac{0{,}27739 + 0{,}27141 + 0{,}27620}{3} = 0{,}27500 \text{ mg GAE/g ekstrak}$$

2.2.2.3 Aseton

$$x_1 = \frac{0{,}331 - 0{,}0521}{0{,}0836} = 3{,}3361$$

$$= \frac{3{,}3361 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}33361 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_2 = \frac{0{,}331 - 0{,}0521}{0{,}0836} = 3{,}3361$$

$$= \frac{3{,}3361 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}33361 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x_3 = \frac{0{,}334 - 0{,}0521}{0{,}0836} = 3{,}3720$$

$$= \frac{3{,}3720 \text{ mg GAE}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times 10 \text{ mL} \times \frac{1 \text{ mL}}{10 \text{ mL}} \times \frac{1}{0{,}01 \text{ g}} = 0{,}33720 \frac{\text{mg GAE}}{\text{g ekstrak}}$$

$$x = \frac{0{,}33361 + 0{,}33361 + 0{,}33720}{3} = 0{,}33481 \text{ mg GAE/g ekstrak}$$

2.2.2.4 Perhitungan Statistik Kadar Fenol Total Ekstrak *n*-Heksana, Etil Asetat, dan Aseton *B. forbesii*

1. Perhitungan Statistik Kadar Fenol Total Ekstrak *n*-Heksana Alga *B. forbesii*

No.	Xi Kadar Fenol Total (mg GAE/g sampel)	$(Xi - X_{rata\text{-}rata})$	$(Xi - X_{rata\text{-}rata})^2$
1.	0,25108	–0,00319	$101{,}761 \times 10^{-7}$
2.	0,25467	0,00040	$1{,}600 \times 10^{-7}$
3.	0,25706	0,00279	$77{,}841 \times 10^{-7}$
n = 3	$X_{rata\text{-}rata} = 0{,}25427$		$\sum(Xi - X_{rata\text{-}rata})^2 = 181{,}202 \times 10^{-7}$

$$SD = \sqrt{\frac{\sum(Xi - X_{rata\text{-}rata})^2}{n - 1}} = \sqrt{\frac{181{,}202 \times 10^{-7}}{3 - 1}} = 0{,}00301$$

Maka kadar fenol total ekstrak *n*-heksana adalah:

$\mu = X_{rata\text{-}rata} \pm SD = 0{,}2543 \pm 0{,}0030$ mg GAE/g sampel

2. Perhitungan Statistik Kadar Fenol Total Ekstrak Etil Asetat Alga *B. forbesii*

No.	Xi Kadar Fenol Total (mg GAE/g sampel)	$(Xi - X_{rata\text{-}rata})$	$(Xi - X_{rata\text{-}rata})^2$
1.	0,27739	0,00239	$5{,}7121 \times 10^{-6}$
2.	0,27141	–0,00359	$12{,}8881 \times 10^{-6}$
3.	0,27620	0,00120	$1{,}4400 \times 10^{-6}$
n = 3	$X_{rata\text{-}rata} = 0{,}27500$		$\sum(Xi - X_{rata\text{-}rata})^2 = 20{,}0402 \times 10^{-6}$

$$SD = \sqrt{\frac{\sum(Xi - X_{rata\text{-}rata})^2}{n - 1}} = \sqrt{\frac{20{,}0402 \times 10^{-6}}{3 - 1}} = 0{,}00317$$

Maka kadar fenol total ekstrak etil asetat adalah:

$\mu = X_{rata\text{-}rata} \pm SD = 0{,}2750 \pm 0{,}0032$ mg GAE/g sampel

3. Perhitungan Statistik Kadar Fenol Total Ekstrak Aseton Alga *B. forbesii*

No.	Xi Kadar Fenol Total (mg GAE/g sampel)	$(Xi - X_{rata\text{-}rata})$	$(Xi - X_{rata\text{-}rata})^2$
1.	0,33361	0,00120	$1{,}43201 \times 10^{-6}$
2.	0,33361	–0,00120	$1{,}43201 \times 10^{-6}$
3.	0,3372	0,00239	$5{,}72804 \times 10^{-6}$
n = 3	$X_{rata\text{-}rata} = 0{,}33481$		$\sum(Xi - X_{rata\text{-}rata})^2 = 8{,}59207 \times 10^{-6}$

$$SD = \sqrt{\frac{\sum(Xi - X_{rata\text{-}rata})^2}{n - 1}} = \sqrt{\frac{8{,}59207 \times 10^{-6}}{3 - 1}} = 0{,}00207$$

Maka kadar fenol total ekstrak aseton adalah:

$\mu = X_{rata\text{-}rata} \pm SD = 0{,}3348 \pm 0{,}0021$ mg GAE/g sampel

2.2.2.5 Kadar Fenol Total Ekstrak

Ekstrak	Replikasi	Absorbansi	mg GAE/g ekstrak	Rata-rata mg GAE/g ekstrak
n-Heksana	1	0,262	0,25108	0,2543 ± 0,0030
	2	0,265	0,25467	
	3	0,267	0,25706	
Etil Asetat	1	0,284	0,27739	0,2750 ± 0,0032
	2	0,279	0,27141	
	3	0,283	0,27620	
Aseton	1	0,331	0,33361	0,3348 ± 0,0021
	2	0,331	0,33361	
	3	0,334	0,33720	

2.3 Aktivitas Antioksidan Uji DPH

2.3.1 Perhitungan Pembuatan Larutan Uji DPPH

2.3.1.1 Perhitungan Pembuatan 100 mL DPPH 0,4 mM

$$m = M \times V \times Mr$$

$$= 0{,}0004 \times 0{,}1 \times 394{,}32 = 0{,}0157 \text{ g DPPH}$$

2.3.1.2 Perhitungan Pembuatan Larutan Pembanding (AA)

Pembuatan Larutan Induk (500 ppm)

$$ppm = \frac{\mu g \text{ AA}}{mL}$$

$$\mu g \text{ AA} = ppm \times mL$$

$$= 500 \text{ ppm} \times 10 \text{ mL}$$

$$= 5000 \text{ µg} = 0{,}005 \text{ g AA}$$

2.3.1.3 Pembuatan Larutan Standar (0,25; 0,5; 1; 2; dan 4 ppm)

Larutan Standar AA 0,25 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{0{,}25 \text{ ppm}}{5 \text{ ppm}} = 0{,}25 \text{ mL}$$

Larutan Standar AA 0,50 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{0{,}5 \text{ ppm}}{5 \text{ ppm}} = 0{,}5 \text{ mL}$$

Larutan Standar AA 1 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{1 \text{ ppm}}{5 \text{ ppm}} = 1 \text{ mL}$$

Larutan Standar AA 2 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{2 \text{ ppm}}{5 \text{ ppm}} = 2 \text{ mL}$$

Larutan Standar AA 4 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{4 \text{ ppm}}{5 \text{ ppm}} = 4 \text{ mL}$$

2.3.1.4 Pembuatan Larutan Deret Ekstrak

Pembuatan Larutan Induk 1000 ppm

$$\text{ppm} = \frac{\mu\text{g ekstrak}}{\text{mL}}$$

$$\mu\text{g ekstrak} = \text{ppm} \times \text{mL}$$

$$= 1000 \text{ ppm} \times 10 \text{ mL}$$

$$= 10000 \text{ µg} = 0{,}01 \text{ g ekstrak}$$

2.3.1.5 Larutan Standar (0,25; 0,5; 1; 2; dan 4 ppm)

Pembuatan Larutan Standar 40 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{40 \text{ ppm}}{1000 \text{ ppm}} = 0{,}2 \text{ mL}$$

Pembuatan Larutan Standar 80 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{80 \text{ ppm}}{1000 \text{ ppm}} = 0{,}4 \text{ mL}$$

Pembuatan Larutan Standar 160 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{160 \text{ ppm}}{1000 \text{ ppm}} = 0{,}8 \text{ mL}$$

Pembuatan Larutan Standar 320 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{320 \text{ ppm}}{1000 \text{ ppm}} = 1{,}6 \text{ mL}$$

Pembuatan Larutan Standar 640 ppm

$$V_0 = V \times \frac{M}{M_0} = 5 \text{ mL} \times \frac{640 \text{ ppm}}{1000 \text{ ppm}} = 3{,}2 \text{ mL}$$

2.3.2 Perhitungan Aktivitas Antioksidan

2.3.2.1 Aktivitas Antioksidan (%) Asam Askorbat

Perhitungan Aktivitas Antioksidan

Konsentrasi AA	Aktivitas Antioksidan (%)		Rerata Aktivitas Antioksidan (%)
	U1	U2	
0,25 ppm	1,84	3,05	2,45
0,5 ppm	13,52	13,03	13,28
1 ppm	25,00	24,44	24,72
2 ppm	48,16	46,64	47,40
4 ppm	61,89	62,73	62,31

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

Penentuan Aktivitas Antioksidan (%) U1

$$\% \text{ (0,25 ppm)} = \frac{0,488 - 0,479}{0,488} \times 100\% = 1,8443\%$$

$$\% \text{ (0,5 ppm)} = \frac{0,488 - 0,422}{0,488} \times 100\% = 13,5246\%$$

$$\% \text{ (1 ppm)} = \frac{0,488 - 0,366}{0,488} \times 100\% = 25,0000\%$$

$$\% \text{ (2 ppm)} = \frac{0,488 - 0,253}{0,488} \times 100\% = 48,1557\%$$

$$\% \text{ (4 ppm)} = \frac{0,488 - 0,186}{0,488} \times 100\% = 61,8852\%$$

Penentuan Aktivitas Antioksidan (%) U2

$$\% \text{ (0,25 ppm)} = \frac{0,491 - 0,476}{0,491} \times 100\% = 3,0550\%$$

$$\% \text{ (0,5 ppm)} = \frac{0,491 - 0,427}{0,491} \times 100\% = 13,0346\%$$

$$\% \text{ (1 ppm)} = \frac{0{,}491 - 0{,}371}{0{,}491} \times 100\% = 24{,}4399\%$$

$$\% \text{ (2 ppm)} = \frac{0{,}491 - 0{,}262}{0{,}491} \times 100\% = 46{,}6395\%$$

$$\% \text{ (4 ppm)} = \frac{0{,}491 - 0{,}183}{0{,}491} \times 100\% = 62{,}7291\%$$

Aktivitas Antioksidan (%) Asam Askorbat U1

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	0,25	1,8443	0,0625	3,40144	0,4611
2.	0,5	13,5246	0,25	182,9148	6,7623
3.	1	25,0000	1	625,0000	25,0000
4.	2	48,1557	4	2318,971	96,3114
5.	4	61,8852	16	3829,778	247,5408
SUM	7,75	150,4098	21,3125	6960,066	376,0756

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2}$$

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

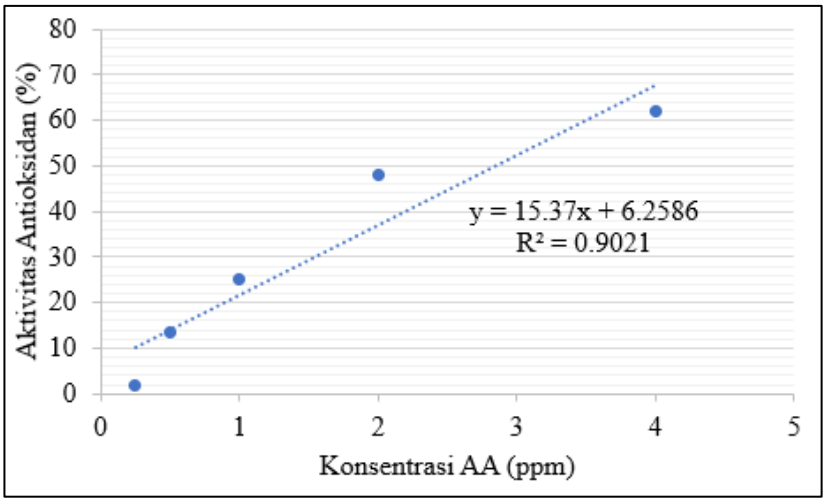
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(150{,}41)(21{,}3125) - (7{,}75)(376{,}08)}{(5)(21{,}3135) - (7{,}75)^2} = 6{,}2586$$

$$b = \frac{(5)(376{,}08) - (7{,}75)(150{,}41)}{(5)(21{,}3125) - (7{,}75)^2} = 15{,}3699$$

$$r = \frac{(5)(376{,}08) - (7{,}75)(150{,}41)}{\sqrt{[(5)(21{,}3125) - (7{,}75)^2][(5)(6960{,}07) - (150{,}41)^2]}} = 0{,}9498$$

$$r^2 = (0{,}9498)^2 = 0{,}9021$$



Perhitungan IC_{50} Asam Askorbat

$$IC_{50} = \frac{50 - 6{,}2586}{15{,}3699} = 2{,}8459 \text{ ppm}$$

Aktivitas Antioksidan (%) Asam Askorbat U2

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	0,25	3,0550	0,0625	9,3330	0,7638
2.	0,5	13,0346	0,25	169,9008	6,5173
3.	1	24,4399	1	597,3087	24,4399
4.	2	46,6395	4	2175,243	93,2790
5.	4	62,7291	16	3934,940	250,9164
SUM	7,75	149,8981	21,3125	6886,725	375,9164

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2}$$

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

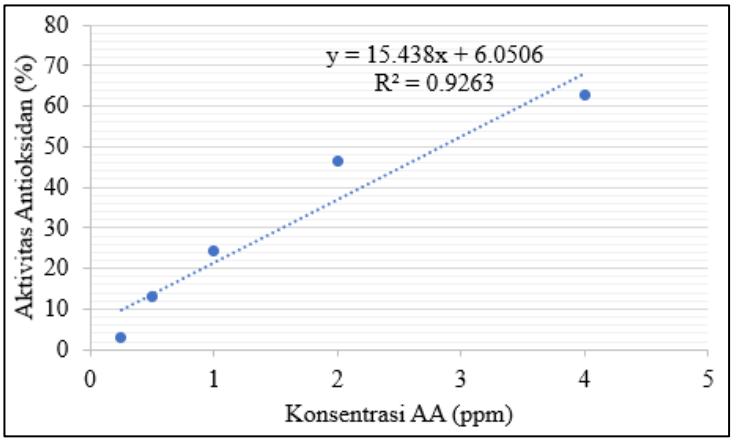
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(149{,}90)(21{,}3125) - (7{,}75)(375{,}92)}{(5)(21{,}3135) - (7{,}75)^2} = 6{,}0506$$

$$b = \frac{(5)(375,92)-(7,75)(149,90)}{(5)(21,3125)-(7,75)^2} = 15,4381$$

$$r = \frac{(5)(375,92)-(7,75)(149,90)}{\sqrt{[(5)(21,3125)-(7,75)^2][(5)(6886,73)-(149,90)^2]}} = 0,9625$$

$$r^2 = (0,9625)^2 = 0,9263$$



Perhitungan IC_{50} Asam Askorbat

$$IC_{50} = \frac{50 - 6,0506}{15,4381} = 2,8468 \text{ ppm}$$

2.3.2.2 Aktivitas Antioksidan (%) *n*-Heksana

Perhitungan Aktivitas Antioksidan

Konsentrasi Sampel (ppm)	Aktivitas Antioksidan (%)		Rerata Aktivitas Antioksidan (%)
	U1	U2	
40	2,30	0,41	1,36
80	4,18	2,89	3,54
160	18,62	10,35	14,49
320	23,85	27,33	25,59
640	44,14	44,93	44,54

Penentuan Aktivitas Antioksidan (%) U1

$$\%\ (40\ ppm) = \frac{0,478 - 0,467}{0,478} \times 100\% = 2,3013\%$$

$$\%\ (80\ ppm) = \frac{0,478 - 0,458}{0,478} \times 100\% = 4,1841\%$$

$$\%\ (160\ ppm) = \frac{0,478 - 0,389}{0,478} \times 100\% = 18,6192\%$$

$$\%\ (320\ ppm) = \frac{0,478 - 0,364}{0,478} \times 100\% = 23,8494\%$$

$$\%\ (640\ ppm) = \frac{0,478 - 0,267}{0,478} \times 100\% = 44,1426\%$$

Penentuan Aktivitas Antioksidan (%) U2

$$\%\ (40\ ppm) = \frac{0,483 - 0,481}{0,483} \times 100\% = 0,4141\%$$

$$\%\ (80\ ppm) = \frac{0,483 - 0,469}{0,483} \times 100\% = 2,8986\%$$

$$\%\ (160\ ppm) = \frac{0,483 - 0,433}{0,483} \times 100\% = 10,3520\%$$

$$\%\ (320\ ppm) = \frac{0,483 - 0,351}{0,483} \times 100\% = 27,3292\%$$

$$\% \text{ (640 ppm)} = \frac{0{,}483 - 0{,}266}{0{,}483} \times 100\% = 44{,}9275\%$$

Aktivitas Antioksidan (%) Ekstrak *n*-Heksana U1

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	2,3013	1600	5,2960	92,0520
2.	80	4,1841	6400	17,5067	334,728
3.	160	18,6192	25600	346,6746	2979,072
4.	320	23,8494	102400	568,7939	7631,808
5.	640	44,1426	409600	1948,569	28251,26
SUM	1240	93,0966	545600	2886,840	39288,92

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2}$$

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

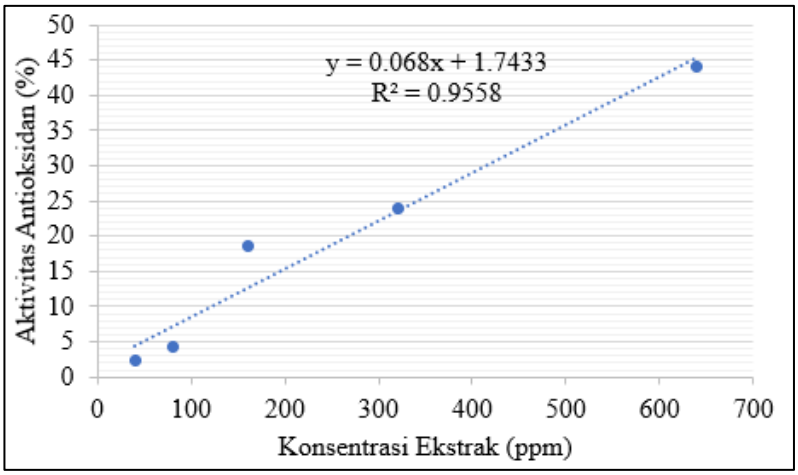
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(93{,}10)(545600) - (1240)(39288{,}92)}{(5)(545600) - (1240)^2} = 1{,}7433$$

$$b = \frac{(5)(39288{,}92) - (1240)(93{,}10)}{(5)(545600) - (1240)^2} = 0{,}0680$$

$$r = \frac{(5)(39350) - (1240)(93{,}10)}{\sqrt{[(5)(545600) - (1240)^2][(5)(2862{,}9739) - (93{,}10)^2]}} = 0{,}9776$$

$$r^2 = (0{,}9776)^2 = 0{,}9558$$



Perhitungan IC_{50} *n*-Heksana

$$IC_{50} = \frac{50 - 1{,}7433}{0{,}0680} = 709{,}1522 \text{ ppm}$$

Aktivitas Antioksidan (%) Ekstrak *n*-Heksana U2

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	0,4141	1600	0,1715	16,5640
2.	80	2,8986	6400	8,4019	231,8880
3.	160	10,3520	25600	107,1639	1656,320
4.	320	27,3292	102400	746,8852	8745,344
5.	640	44,9275	409600	2018,4803	28753,60
SUM	1240	85,9214	545600	2881,1027	39403,72

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2}$$

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

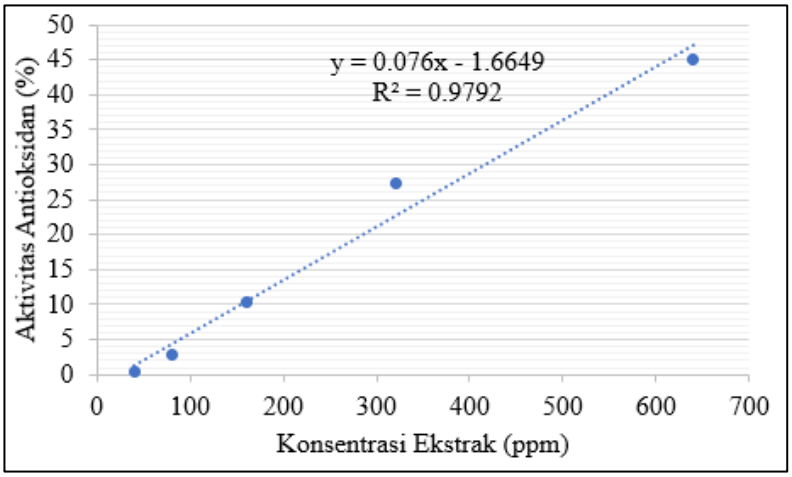
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(85{,}92)(545600) - (1240)(39403{,}72)}{(5)(545600) - (1240)^2} = -1{,}6649$$

$$b = \frac{(5)(39403,72) - (1240)(85,92)}{(5)(545600) - (1240)^2} = 0,0760$$

$$r = \frac{(5)(39403,72) - (1240)(85,92)}{\sqrt{[(5)(545600) - (1240)^2][(5)(2881,10) - (85,92)^2]}} = 0,9895$$

$$r^2 = (0,9895)^2 = 0,9792$$



Perhitungan IC_{50} *n*-Heksana

$$IC_{50} = \frac{50 + 1,6649}{0,0760} = 679,7589 \text{ ppm}$$

2.3.2.3 Aktivitas Antioksidan (%) Etil Asetat

Perhitungan Aktivitas Antioksidan

Konsentrasi Sampel (ppm)	Aktivitas Antioksidan (%)		Rerata Aktivitas Antioksidan (%)
	U1	U2	
40	2,68	3,93	3,31
80	5,97	7,45	6,71
160	18,56	19,46	19,01
320	23,92	26,09	25,00
640	60,00	57,56	58,78

Penentuan Aktivitas Antioksidan (%) U1

$$\% \text{ (40 ppm)} = \frac{0,485 - 0,472}{0,485} \times 100\% = 2,6804\%$$

$$\% \text{ (80 ppm)} = \frac{0,485 - 0,456}{0,485} \times 100\% = 5,9794\%$$

$$\% \text{ (160 ppm)} = \frac{0,485 - 0,395}{0,485} \times 100\% = 18,5567\%$$

$$\% \text{ (320 ppm)} = \frac{0,485 - 0,369}{0,485} \times 100\% = 23,9175\%$$

$$\% \text{ (640 ppm)} = \frac{0,485 - 0,194}{0,485} \times 100\% = 60,0000\%$$

Penentuan Aktivitas Antioksidan (%) U2

$$\% \text{ (40 ppm)} = \frac{0,483 - 0,464}{0,483} \times 100\% = 3,9337\%$$

$$\% \text{ (80 ppm)} = \frac{0,483 - 0,447}{0,483} \times 100\% = 7,4534\%$$

$$\% \text{ (160 ppm)} = \frac{0,483 - 0,389}{0,483} \times 100\% = 19,4617\%$$

$$\% \text{ (320 ppm)} = \frac{0,483 - 0,357}{0,483} \times 100\% = 26,0870\%$$

$$\% \text{ (640 ppm)} = \frac{0{,}483 - 0{,}205}{0{,}483} \times 100\% = 57{,}5569\%$$

Aktivitas Antioksidan (%) Ekstrak Etil Asetat U1

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	2,6804	1600	7,1845	107,2160
2.	80	5,9794	6400	35,7532	478,3520
3.	160	18,5567	25600	344,3511	2969,072
4.	320	23,9175	102400	572,0468	7653,600
5.	640	60,0000	409600	3600,000	38400,00
SUM	1240	111,1340	545600	4559,336	49608,24

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

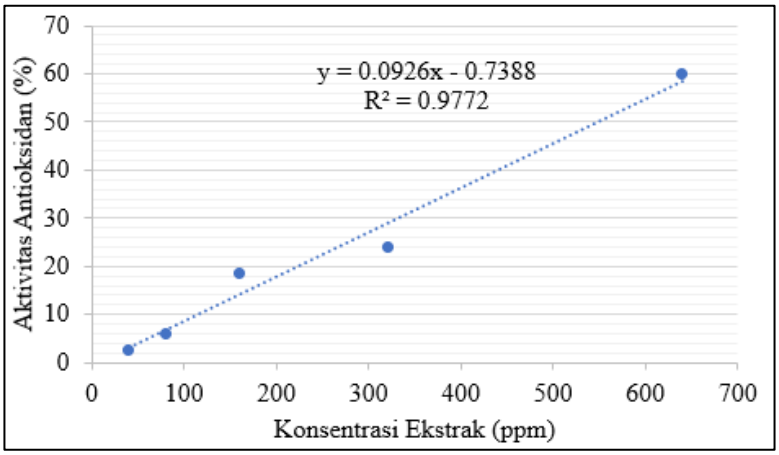
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(111{,}13)(545600) - (1240)(49608{,}24)}{(5)(545600) - (1240)^2} = -0{,}7388$$

$$b = \frac{(5)(49608{,}24) - (1240)(111{,}13)}{(5)(545600) - (1240)^2} = 0{,}0926$$

$$r = \frac{(5)(49608{,}24) - (1240)(111{,}13)}{\sqrt{[(5)(545600) - (1240)^2][(5)(4559{,}34) - (111{,}13)^2]}} = 0{,}9885$$

$$r^2 = (0{,}9885)^2 = 0{,}9772$$



Perhitungan IC_{50} Etil Asetat

$$IC_{50} = \frac{50 + 0{,}7388}{0{,}0926} = 547{,}9157 \text{ ppm}$$

Aktivitas Antioksidan (%) Ekstrak Etil Asetat U2

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	3,9337	1600	15,4740	157,3480
2.	80	7,4534	6400	55,5532	596,2720
3.	160	19,4617	25600	378,7578	3113,872
4.	320	26,0870	102400	680,5316	8347,840
5.	640	57,5569	409600	3312,797	36836,42
SUM	1240	114,4927	545600	4443,113	49051,75

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

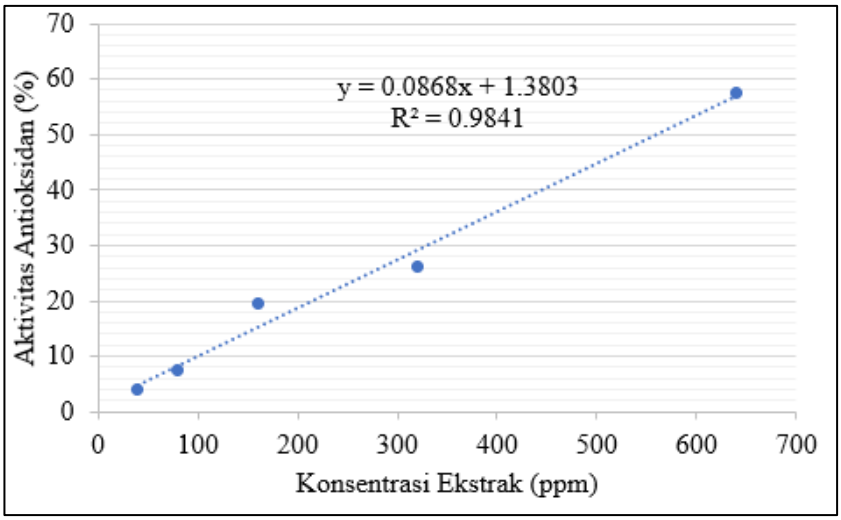
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(114{,}49)(545600) - (1240)(49051{,}75)}{(5)(545600) - (1240)^2} = 1{,}3803$$

$$b = \frac{(5)(49051{,}75) - (1240)(114{,}49)}{(5)(545600) - (1240)^2} = 0{,}0868$$

$$r = \frac{(5)(49051{,}75) - (1240)(114{,}49)}{\sqrt{[(5)(545600) - (1240)^2][(5)(4443{,}11) - (114{,}49)^2]}} = 0{,}9920$$

$$r^2 = (0{,}9920)^2 = 0{,}9841$$



Perhitungan IC_{50} Etil Asetat

$$IC_{50} = \frac{50 - 1{,}38D03}{0{,}0868} = 560{,}3465 \text{ ppm}$$

2.3.2.4 Aktivitas Antioksidan (%) Aseton

Perhitungan Aktivitas Antioksidan

Konsentrasi Sampel (ppm)	Aktivitas Antioksidan (%)		Rerata Aktivitas Antioksidan (%)
	U1	U2	
40	6,09	4,09	5,09
80	7,93	5,73	6,83
160	21,75	21,06	21,41
320	28,25	25,97	27,11
640	61,99	60,33	61,16

Penentuan Aktivitas Antioksidan (%) U1

$$\% \text{ (40 ppm)} = \frac{0,492 - 0,462}{0,492} \times 100\% = 6,0976\%$$

$$\% \text{ (80 ppm)} = \frac{0,492 - 0,453}{0,492} \times 100\% = 7,9268\%$$

$$\% \text{ (160 ppm)} = \frac{0,492 - 0,385}{0,492} \times 100\% = 21,7480\%$$

$$\% \text{ (320 ppm)} = \frac{0,492 - 0,353}{0,492} \times 100\% = 28,2520\%$$

$$\% \text{ (640 ppm)} = \frac{0,492 - 0,187}{0,492} \times 100\% = 61,9919\%$$

Penentuan Aktivitas Antioksidan (%) U2

$$\% \text{ (40 ppm)} = \frac{0,489 - 0,469}{0,489} \times 100\% = 4,0900\%$$

$$\% \text{ (80 ppm)} = \frac{0,489 - 0,461}{0,489} \times 100\% = 5,7260\%$$

$$\% \text{ (160 ppm)} = \frac{0,489 - 0,386}{0,489} \times 100\% = 21,0634\%$$

$$\% \text{ (320 ppm)} = \frac{0,489 - 0,362}{0,489} \times 100\% = 25,9714\%$$

$$\% \text{ (640 ppm)} = \frac{0{,}489 - 0{,}194}{0{,}489} \times 100\% = 60{,}3272\%$$

Aktivitas Antioksidan (%) Ekstrak Aseton U1

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	6,0976	1600	37,1807	243,9040
2.	80	7,9268	6400	62,8342	634,1440
3.	160	21,7480	25600	472,9755	3479,680
4.	320	28,2520	102400	798,1755	9040,640
5.	640	61,9919	409600	3842,996	39674,82
SUM	1240	126,0163	545600	5214,162	53073,18

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

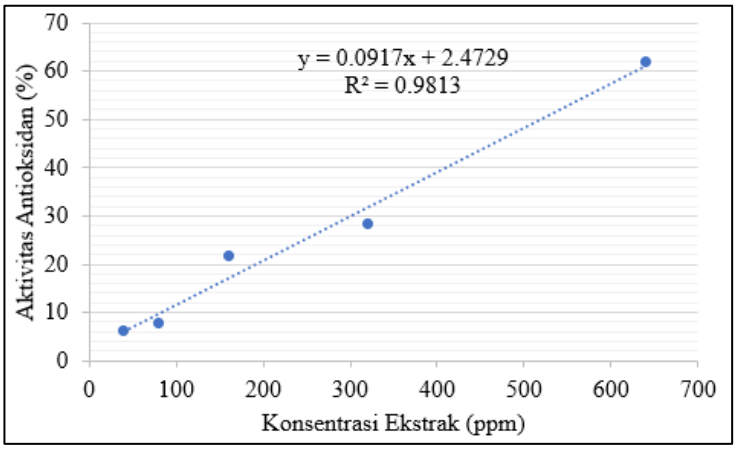
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(126{,}02)(545600) - (1240)(53073{,}18)}{(5)(545600) - (1240)^2} = 2{,}4729$$

$$b = \frac{(5)(53073{,}18) - (1240)(126{,}02)}{(5)(545600) - (1240)^2} = 0{,}0917$$

$$r = \frac{(5)(53073{,}18) - (1240)(126{,}02)}{\sqrt{[(5)(545600) - (1240)^2][(5)(5214{,}16) - (126{,}02)^2]}} = 0{,}9906$$

$$r^2 = (0{,}9906)^2 = 0{,}9813$$



Perhitungan IC_{50} Aseton

$$IC_{50} = \frac{50 - 2{,}4729}{0{,}0917} = 518{,}5453 \text{ ppm}$$

Aktivitas Antioksidan (%) Ekstrak Aseton U2

No.	Konsentrasi (ppm) [X]	Aktivitas Antioksidan (%) [Y]	$[X^2]$	$[Y^2]$	[XY]
1.	40	4,0900	1600	16,7281	163,6000
2.	80	5,7269	6400	32,7974	458,1520
3.	160	21,0634	25600	443,6668	3370,144
4.	320	25,9714	102400	674,5136	8310,848
5.	640	60,3272	409600	3639,371	38609,41
SUM	1240	117,1789	545600	4807,077	50912,15

$$a = \frac{\sum Y \sum X^2 - \sum X \sum XY}{n\sum X^2 - (\sum X)^2} \qquad b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

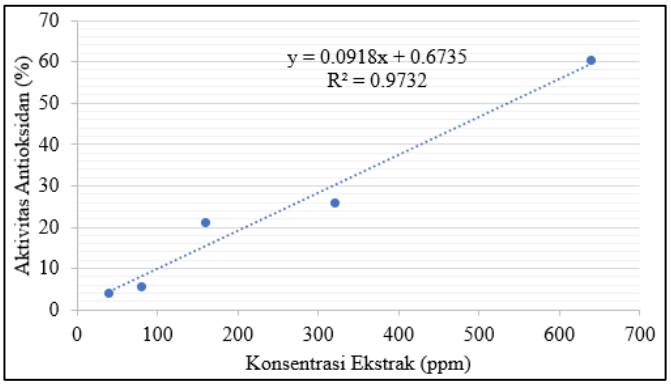
$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$a = \frac{(117{,}18)(545600) - (1240)(50912{,}15)}{(5)(545600) - (1240)^2} = 0{,}6735$$

$$b = \frac{(5)(50912{,}15) - (1240)(117{,}18)}{(5)(545600) - (1240)^2} = 0{,}0918$$

$$r = \frac{(5)(50912{,}15) - (1240)(117{,}18)}{\sqrt{[(5)(545600) - (1240)^2][(5)(4807{,}08) - (117{,}18)^2]}} = 0{,}9865$$

$r^2 = (0{,}9865)^2 = 0{,}9732$



Perhitungan IC_{50} Aseton

$$IC_{50} = \frac{50 - 0{,}6735}{0{,}0918} = 537{,}4230 \text{ ppm}$$

2.3.3 Analisa Aktivitas Antioksidan Ekstrak Berbagai Pelarut

Kelompok	Konsentrasi (ppm)	Absorbansi	Aktivitas Antioksidan (%)	Persamaan Linear dan IC_{50} (ppm)
Ekstrak *n*-Heksana U1 (A_0 = 0,478)	40	0,467	2,3013	y = 0,0680x + 1,7433 IC_{50} = 709,1522
	80	0,458	4,1841	
	160	0,389	18,6192	
	320	0,364	23,8494	
	640	0,267	44,1426	
Ekstrak *n*-Heksana U2 (A_0 = 0,483)	40	0,481	0,4141	y = 0,0760x – 1,6649 IC_{50} = 679,7589
	80	0,469	2,8986	
	160	0,433	10,3520	
	320	0,351	27,3292	
	640	0,266	44,9275	
Ekstrak Etil Asetat U1 (A_0 = 0,485)	40	0,472	2,6804	y = 0,0926x – 0,7388 IC_{50} = 547,9157
	80	0,456	5,9794	
	160	0,395	18,5567	
	320	0,369	23,9175	
	640	0,194	60,0000	
Ekstrak Etil Asetat U2 (A_0 = 0,483)	40	0,464	3,9337	y = 0,0868x + 1,3803 IC_{50} = 560,3465
	80	0,447	7,4534	
	160	0,389	19,4617	
	320	0,357	26,0870	
	640	0,205	57,5569	
Ekstrak Aseton U1 (A_0 = 0,492)	40	0,462	6,0976	y = 0,0917x + 2,4729 IC_{50} = 518,5453
	80	0,453	7,9268	
	160	0,385	21,7480	
	320	0,353	28,2520	
	640	0,187	61,9919	
Ekstrak Aseton U2 (A_0 = 0,489)	40	0,469	4,0900	y = 0,0918x + 0,6735 IC_{50} = 537,4230
	80	0,461	5,7269	
	160	0,386	21,0634	
	320	0,362	25,9714	
	640	0,194	60,3272	

2.4 Analisis Data Statistik

2.4.1 Kadar Total Fenol

2.4.1.1 Uji Normalitas

One-Sample Kolmogorov-Smirnov Test

		Kadar Fenol Total
N		9
Normal Parameters[a,b]	Mean	.2880256
	Std. Deviation	.03629648
Most Extreme Differences	Absolute	.282
	Positive	.282
	Negative	-.229
Test Statistic		.282
Asymp. Sig. (2-tailed)		.058[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Keterangan: Syarat data normal (5%) ≥ 0,05

Sig. 0,058 > 0,05 = dilanjut dengan Uji Homogenitas.

2.4.1.2 Uji Homogenitas

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Kadar Fenol Total	Based on Mean	.355	2	6	.715
	Based on Median	.137	2	6	.874
	Based on Median and with adjusted df	.137	2	5.622	.874
	Based on trimmed mean	.332	2	6	.730

Keterangan: Syarat data normal (5%) ≥ 0,05

Sig. 0,715 > 0,05 = dilanjut dengan Uji *One Way* ANOVA.

2.4.1.3 Uji ANOVA

ANOVA

Kadar Fenol Total

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.010	2	.005	673.294	.000
Within Groups	.000	6	.000		
Total	.011	8			

Keterangan: Syarat data berpengaruh (5%) ≤ 0,05

Sig. 0,000 < 0,05, menunjukkan data berpengaruh.

2.4.2 Aktivitas Antioksidan DPPH

2.4.2.1 Uji Normalitas

One-Sample Kolmogorov-Smirnov Test

		Nilai IC50
N		8
Normal Parameters[a,b]	Mean	444.854287
	Std. Deviation	281.2561199
Most Extreme Differences	Absolute	.353
	Positive	.192
	Negative	-.353
Test Statistic		.353
Asymp. Sig. (2-tailed)		.004[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Keterangan: Syarat data normal (5%) ≥ 0,05

Sig. 0,004 < 0,05 (tidak normal) = dilanjut dengan Uji Homogenitas.

2.4.2.2 Uji Homogenitas

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Nilai IC50	Based on Mean	4.680E+28	3	4	.000
	Based on Median	4.680E+28	3	4	.000
	Based on Median and with adjusted df	4.680E+28	3	1.000	.000
	Based on trimmed mean	4.679E+28	3	4	.000

Keterangan: Syarat data normal (5%) ≥ 0,05

Sig. 0,000 > 0,05 (tidak normal) = dilanjut dengan Uji Kruskal-Wallis.

2.4.2.3 Uji Kruskal-Wallis

Test Statistics[a,b]

	Nilai IC50
Kruskal-Wallis H	6.667
df	3
Asymp. Sig.	.043

a. Kruskal Wallis Test

b. Grouping Variable: Jenis Pelarut

Keterangan: Syarat data berpengaruh (5%) ≥ 0,05

Sig. 0,043 < 0,05, menunjukkan data berpengaruh.

2.4.3 Analisis Korelasi Kadar Total Fenol dan Aktivitas Antioksidan

Correlations

		Kadar Fenol Total	Aktivitas Antioksidan (%)
Kadar Fenol Total	Pearson Correlation	1	.783
	Sig. (2-tailed)		.046
	N	6	6
Aktivitas Antioksidan (%)	Pearson Correlation	.783	1
	Sig. (2-tailed)	.046	
	N	6	6

Keterangan: Syarat data berkorelasi (5%) ≤ 0,05

Sig. 0,046 < 0,05, menunjukkan data berkorelasi yang signifikan.

Lampiran 3. Dokumentasi Penelitian

Proses Maserasi

Proses Evaporasi

Uji Fitokimia Ekstrak Aseton

Uji Fitokimia Ekstrak *n*-Heksana

Uji Fitokimia Ekstrak Etil Asetat

Proses Partisi