

FORMAT SURAT PERNYATAAN BEBAS PLAGIARISME

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Yuti Rosiyanti

N P M : 11181104

adalah mahasiswa Fakultas Farmasi, Universitas Bhakti Kencana, menyatakan dengan sesungguhnya bahwa Naskah Tugas Akhir/Skripsi yang saya tulis dengan judul:

PENETAPAN KADAR FLAVONOID DAN PENETAPAN KADAR FENOLAT TOTAL SERTA AKTIVITAS ANTIOKSIDAN DARI TANAMAN *Syzygium polyanthum* (Wight) Walp , *Syzygium malaccense* (L) Merr. & L.M.Perry , *Eugenia uniflora* L DENGAN METODE PEREDAMAN RADIKAL BEBAS DPPH

adalah benar-benar merupakan hasil karya saya sendiri. Apabila di kemudian hari diketahui bahwa isi Naskah Skripsi ini merupakan hasil plagiasi, maka saya bersedia menerima sanksi berupa pembatalan kelulusan dan atau pencabutan gelar yang saya peroleh.

Demikian surat pernyataan ini saya buat untuk dapat dipergunakan sebagaimana mestinya.

Bandung , 28 juli 2022

Yang membuat pernyataan



(Yuti Rosiyanti)

NPM . 11181104

FORMAT SURAT PERSETUJUAN UNTUK DIPUBLIKASI DI MEDIA ONLINE

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Yuti Rosiyanti

N P M 11181104

Menyatakan bahwa demi kepentingan perkembangan ilmu pengetahuan, saya menyetujui abstrak Skripsi yang saya tulis dengan judul:

PENETAPAN KADAR FLAVONOID DAN PENETAPAN KADAR FENOLAT TOTAL SERTA AKTIVITAS ANTIOKSIDAN DARI TANAMAN *Syzygium polyanthum* (Wight) Walp , *Syzygium malaccense* (L) Merr. & L.M.Perry , *Eugenia uniflora* L DENGAN METODE PEREDAMAN RADIKAL BEBAS DPPH

Untuk dipublikasikan atau ditampilkan di internet atau media lain yaitu Digital Library Perpustakaan Universitas Bhakti Kencana untuk kepentingan akademik, sebatas sesuai dengan Undang-Undang Hak Cipta.

Demikian surat pernyataan ini saya buat untuk dapat dipergunakan sebagaimana mestinya.

Bandung , 28 juli 2022

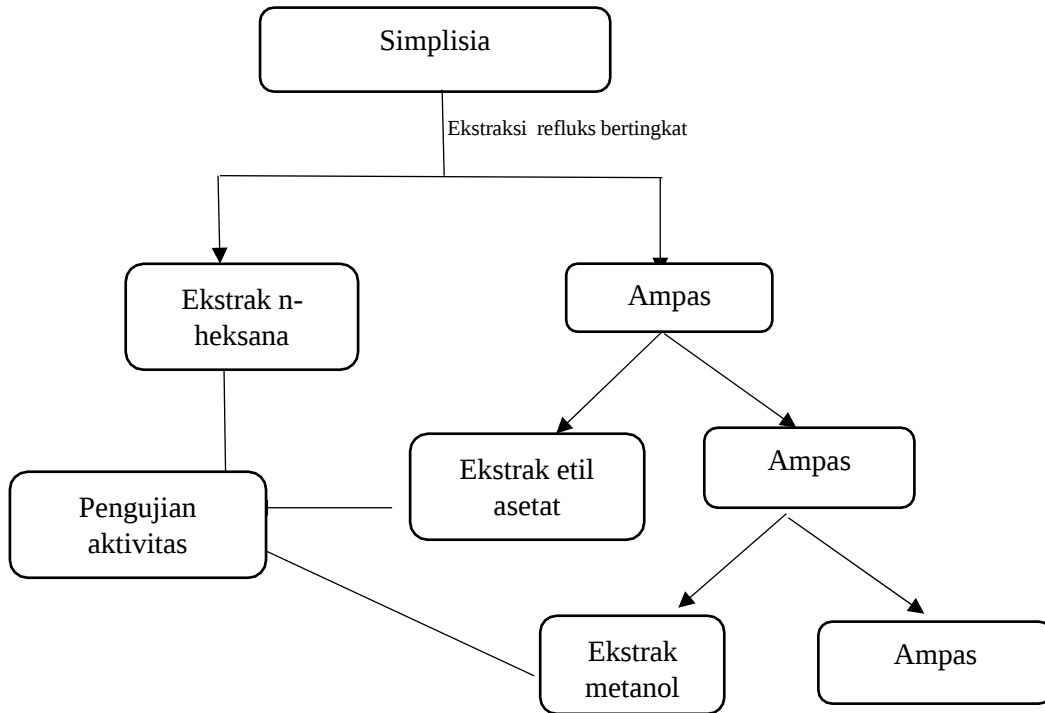
Yang membuat pernyataan,



(Yuti Rosiyanti)

NPM . 11181104

LAMPIRAN
LAMPIRAN 1 BAGAN ALIR PENELITIAN



LAMPIRAN 2 SURAT DETERMINASI



INSTITUT TEKNOLOGI BANDUNG SEKOLAH ILMU DAN TEKNOLOGI HAYATI

Jalan Ganesa 10 Bandung 40132, Telp.: (022) 251 1575, 250 0258, Fax.: (022) 253 4107
e-mail: sith@itb.ac.id http://www.sith.itb.ac.id

Nomor : 131/IT1.C11.2/TA.00/2022
Hal : Determinasi tumbuhan

10 Januari 2022

Kepada Yth.
Dekan
Fakultas Farmasi
Universitas Bhakti Kencana
Jalan Soekarno Hatta No. 754
Bandung

Memperhatikan surat permintaan Saudara dalam surat No. 0023/03.FF.03/UBK/I/2022 tanggal 1 Januari 2022 mengenai determinasi tumbuhan, dengan ini kami sampaikan bahwa setelah dilakukan determinasi oleh staf kami, sampel tumbuhan yang dikirim oleh Sdr. Yuti Rosiyanti (NPM: 11181104), yaitu :

No	Nama sampel	Hasil determinasi	Famili
1	Dewandaru	<i>Eugenia uniflora</i> L.	Myrtaceae
2	Jambu bol	<i>Syzygium malaccense</i> (L.) Merr. & L.M.Perry	Myrtaceae
3	Salam	<i>Syzygium polyanthum</i> (Wight) Walp.	Myrtaceae

Referensi:

1. Backer, C.A., & Bakhuizen van den Brink, R.C. (1963). *Flora of Java*. Vol. I. Groningen, The Netherlands: NVP Noordhoff. pp. 337, 339, 343.

Demikian yang kami sampaikan. Atas perhatian dan kerjasama yang diberikan, kami ucapkan terima kasih.



Wakil Dekan Bidang Sumber Daya,

Dr. Angga Dwiartama
NIP. 198302052012121002

Tembusan:
Dekan SITH ITB, sebagai laporan.

LAMPIRAN 3 PERHITUNGAN KARAKTERISTIK

- Daun jambu bol

Susut Pengeringan	Alat : Moisture Balance Sampel : 2 gram Suhu : 103°C Hasil : % Susut Pengeringan = 7,292%
Kadar Sari Larut Etanol	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 33,11 gram Cawan Isi : 33,24 gram Faktor Pengenceran : 4 Rumus : % Kadar Sari Larut Etanol = Bobot Ekstrak/ Bobot Simplisia X FP X 100% Hasil : % Kadar Sari Larut Etanol = 26%
Kadar Sari Larut Air	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 34,46 gram Cawan Isi : 34,57 gram Faktor Pengenceran : 4 Rumus : %Kadar Sari Larut Air = Bobot Ekstrak/ Bobot Simplisia X FP X 100% Hasil : %Kadar Sari Larut Air = 22%
Kadar Abu Total	Sampel : 3 gram Krus Kosong : 40,76 gram Krus Isi Abu : 40,97 gram Suhu : 400°C Rumus : %Kadar Abu Total = Bobot Abu/ bobot simplisia X 100% Hasil : %Kadar Abu Total = 7%
Kadar abu larut air	Sampel : 3 gram Krus Kosong : 25,42 gram Krus Isi Abu : 25,53 gram Suhu : 400°C Rumus : %kadar abu larut air = Bobot Abu/ bobot simplisia X 100% Hasil : %Kadar Abu larut air = 3,6%

Kadar Abu Tidak Larut Asam	Sampel : 3 gram Krus isi abu : 40,77 gram Krus Kosong : 40,76 %Kadar Abu Tidak Larut Asam = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ %Kadar Abu Tidak Larut Asam = 0,3%
Kadar Air	Sampel : 2 gram Pelarut Toluene Pelarut Awal : 2mL Pelarut Akhir : 2,1 mL $\frac{\text{Akhir-awal}}{\text{sampel}} \times 100 = 5\%$

• **Daun salam**

Susut Pengeringan	Alat : Moisture Balance Sampel : 2 gram Suhu : 104°C Hasil : % Susut Pengeringan = 4,848%
Kadar Sari Larut Etanol	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 33,11 gram Cawan Isi : 33,24 gram Faktor Pengenceran : 4 Rumus : % Kadar Sari Larut Etanol = $\frac{\text{Bobot Ekstrak}}{\text{Bobot Simplisia}} \times \text{FP} \times 100\%$ Hasil : % Kadar Sari Larut Etanol = 14%
Kadar Sari Larut Air	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 34,46 gram Cawan Isi : 34,57 gram Faktor Pengenceran : 4 Rumus : %Kadar Sari Larut Air = $\frac{\text{Bobot Ekstrak}}{\text{Bobot Simplisia}} \times \text{FP} \times 100\%$ Hasil : %Kadar Sari Larut Air = 18%
Kadar Abu Total	Sampel : 3 gram Krus Kosong : 33,07 gram Krus Isi Abu : 33,30 gram Suhu : 400°C Rumus : %Kadar Abu Total = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ Hasil : %Kadar Abu Total = 7,6%

Kadar abu larut air	Sampel : 3 gram Krus Kosong : 25,42 gram Krus Isi Abu : 25,53 gram Suhu : 400°C Rumus : %kadar abu larut air = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ Hasil : %Kadar Abu larut air = 3,6%
Kadar Abu Tidak Larut Asam	Sampel : 3 gram Krus isi abu : 40,77 gram Krus Kosong : 40,76 %Kadar Abu Tidak Larut Asam = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ %Kadar Abu Tidak Larut Asam = 5,6%
Kadar Air	Sampel : 2 gram Pelarut Toluene Pelarut Awal : 2mL Pelarut Akhir : 2,1 mL Akhir-awal/ sampel $\times 100 = 8\%$

• **Daun dawandaru**

Susut Pengeringan	Alat : Moisture Balance Sampel : 2 gram Suhu : 104°C Hasil : % Susut Pengeringan = 9,07%
Kadar Sari Larut Etanol	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 47,66 gram Cawan Isi : 47,75 gram Faktor Pengenceran : 4 Rumus : % Kadar Sari Larut Etanol = $\frac{\text{Bobot Ekstrak}}{\text{Bobot Simplisia}} \times \text{FP} \times 100\%$ Hasil : % Kadar Sari Larut Etanol = 18 %
Kadar Sari Larut Air	Sampel : 2 gram, diambil 25 mL Cawan Kosong : 34,45gram Cawan Isi : 34,48gram Faktor Pengenceran : 4 Rumus : %Kadar Sari Larut Air = $\frac{\text{Bobot Ekstrak}}{\text{Bobot Simplisia}} \times \text{FP} \times 100\%$ Hasil : %Kadar Sari Larut Air = 6%

Kadar Abu Total	Sampel : 3 gram Krus Kosong : 24,37 gram Krus Isi Abu : 24,59 gram Suhu : 400°C Rumus : %Kadar Abu Total = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ Hasil : %Kadar Abu Total = 7,3%
Kadar abu larut air	Sampel : 3 gram Krus Kosong : 25,42 gram Krus Isi Abu : 25,53 gram Suhu : 400°C Rumus : %kadar abu larut air = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ Hasil : %Kadar Abu larut air = 2%
Kadar Abu Tidak Larut Asam	Sampel : 3 gram Krus isi abu : 40,77 gram Krus Kosong : 40,76 %Kadar Abu Tidak Larut Asam = $\frac{\text{Bobot Abu}}{\text{bobot simplisia}} \times 100\%$ %Kadar Abu Tidak Larut Asam = 3,3%
Kadar Air	Sampel : 2 gram Pelarut Toluen Pelarut Awal : 2mL Pelarut Akhir : 2,1 mL Akhir-awal/ sampel $\times 100 = 5\%$

LAMPIRAN 4 PERHITUNGAN RENDEMEN EKSTRAK

• **Jambu bol**

Nama ekstrak	Perhitungan rendemen `	Hasil
1. ekstrak N-heksana	Kosong : 103 Isi : $113,1 - 103 = 10,1 \text{ gram}$ $\frac{10,1}{200 \text{ mg}} \times 100 = 5,05 \%$	5,05 %
2. ekstrak Etil asetat	Kosong : 105,2 Isi : $110,2 - 105,2 = 5 \text{ gram}$ $\frac{5}{200 \text{ mg}} \times 100 = 2,5 \%$	2,5 %
3. ekstrak metanol	Kosong : 106 Isi : $128,08 - 106 = 22,08 \text{ gram}$ $\frac{22,08}{200 \text{ mg}} \times 100 = 11,04 \%$	11,04%

• **Daun salam**

Nama ekstrak	Perhitungan rendemen `	Hasil
1. ekstrak N-heksana	Kosong : 104,50 Isi : $107,6 - 104,50 = 3,6 \text{ gram}$ $\frac{3,6}{200 \text{ mg}} \times 100 = 1,8 \%$	1,8 %
2. ekstrak Etil asetat	Kosong : 104,55 Isi : $117,6 - 104,55 = 12,62 \text{ gram}$ $\frac{12,62}{200 \text{ mg}} \times 100 = 6,325 \%$	6,325 %
3. ekstrak metanol	Kosong : 105,3 Isi : $116,8 - 105,3 = 11,5 \text{ gram}$ $\frac{11,5}{200 \text{ mg}} \times 100 = 5,75 \%$	5,75 %

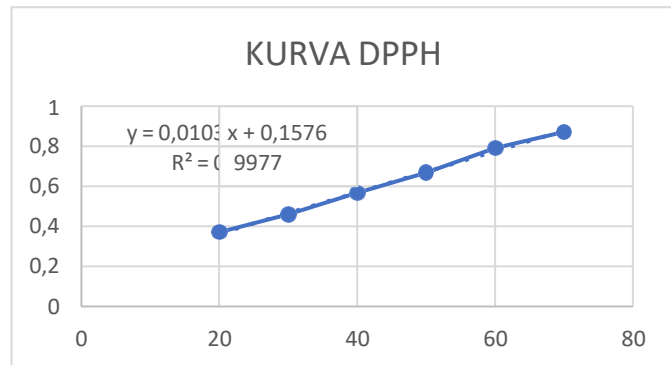
- **Daun dawandaru**

Nama ekstrak	Perhitungan rendemen `	Hasil
1. ekstrak N-heksana	Kosong : 105,3 Isi : 116,8 – 105,3 = 11,5 gram $\frac{11,5}{200 \text{ mg}} \times 100 = 5,75 \%$	5,75 %
2. ekstrak Etil asetat	Kosong : 105,8 Isi : 121,99 – 105,8 = 16,19 gram $\frac{16,19}{200 \text{ mg}} \times 100 = 8,095\%$	8,095%
3. ekstrak metanol	Kosong : 106 Isi : 140,2 – 106 = 34,2 gram $\frac{34,2}{200 \text{ mg}} \times 100 = 11,04 \%$	17,1 %

LAMPIRAN 5 PERHITUNGAN AKTIVITAS ANTIOKSIDAN

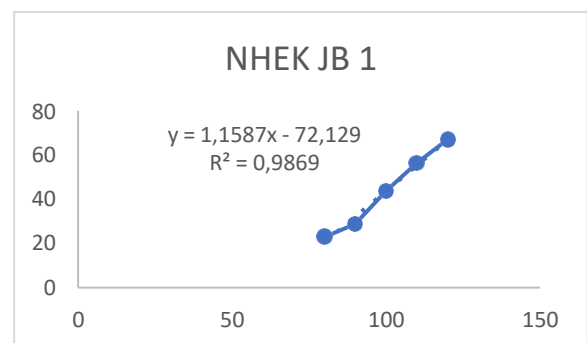
• Kurva kalibrasi DPPH

Konsentrasi (ppm)	Absorbansi
20	0.37
30	0.459
40	0.566
50	0.668
60	0.791
70	0.871
	0.871

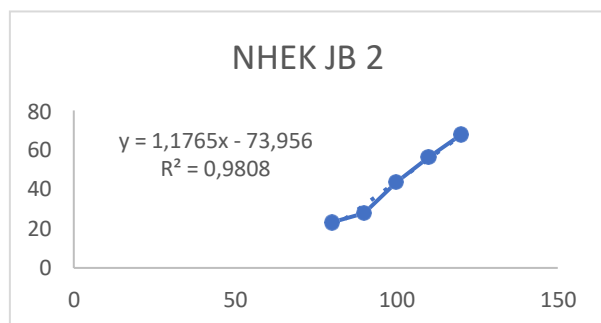


• DAUN JAMBU BOL 1. ekstrak N-heksana

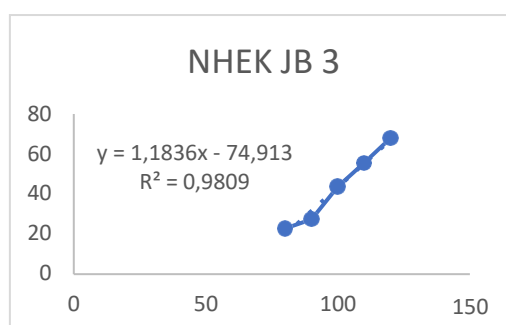
konsentrasi	% inhibisi	IC50
80	22,889	105,4017
90	28,764	
100	43,696	
110	56,304	
120	67,054	



konsentrasi	% inhibisi	IC50
80	23,133	105,36
90	27,764	
100	43,574	
110	56,304	
120	67,687	



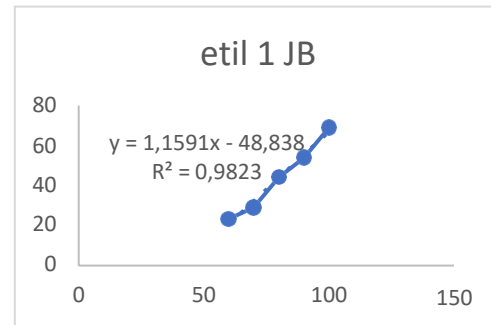
konsentrasi	% inhibisi	IC50
80	22,764	105,5365
90	27,417	
100	43,696	
110	55,447	
120	67,931	



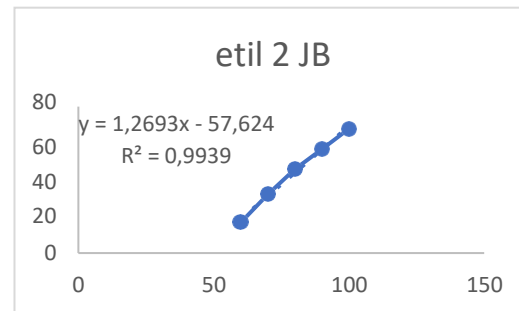
Pengukuran	Nilai IC50	Rata-Rata	STD
1	105,2034	105,37	0,16665
2	105,3600		
3	105,5365		

2. Ekstrak etil asetat

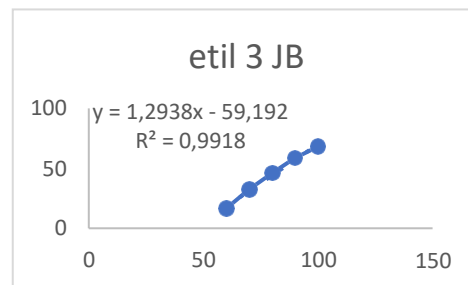
konsentrasi	% inhibisi	IC50
60	23,378	84,87879
70	29,009	
80	44,308	
90	53,856	
100	68,911	



konsentrasi	% inhibisi	IC50
60	16,769	84,79004
70	32,191	
80	45,9	
90	56,793	
100	67,931	



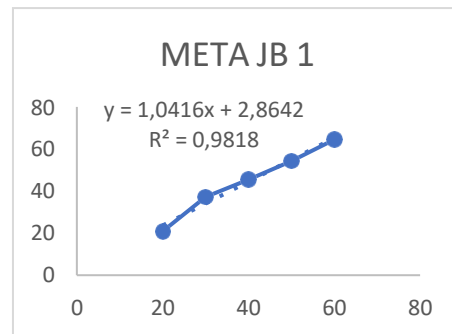
konsentrasi	% inhibisi	IC50
60	16,524	84,39635
70	32,313	
80	46,022	
90	58,629	
100	68,054	



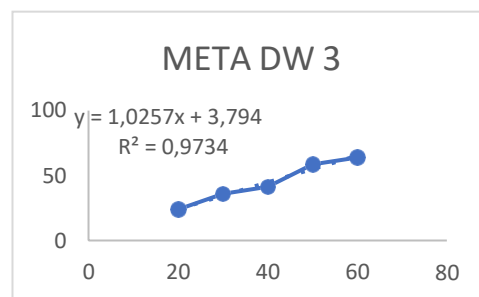
Pengukuran	Nilai IC50	Rata-Rata	STD
1	84,5376	84,57	0,19945
2	84,7900		
3	84,3964		

3. ekstrak metanol

konsentrasi	% inhibisi	IC50
20	20,93	50,74328
30	37,332	
40	45,532	
50	54,345	
60	64,504	



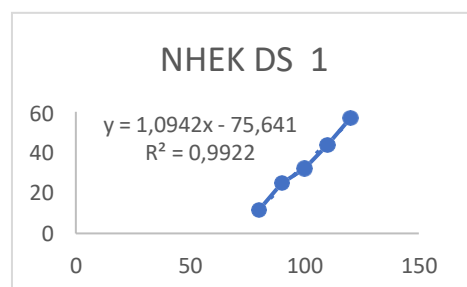
konsentrasi	% inhibisi	IC50
20	23,99	52,44613
30	35,985	
40	41,493	
50	58,752	
60	63,892	



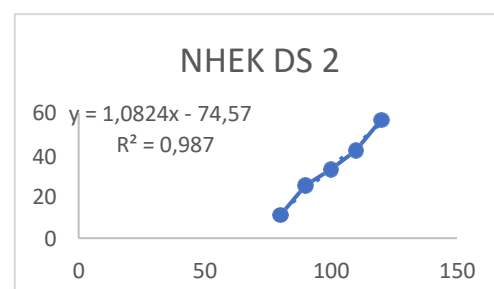
Pengukuran	Nilai IC50	Rata-Rata	STD
1	50,7433	51,59	1,20410
2	52,4461		

- Daun salam
- 1. ekstrak N-heksana

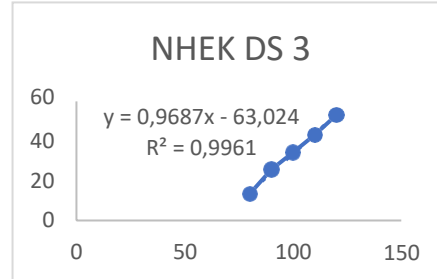
konsentrasi	% inhibisi	IC50
80	11,506	114,8245
90	24,847	
100	32,069	
110	43,696	
120	56,793	



konsentrasi	% inhibisi	IC50
80	11,056	115,0868
90	25,337	
100	33,069	
110	42,105	
120	56,793	



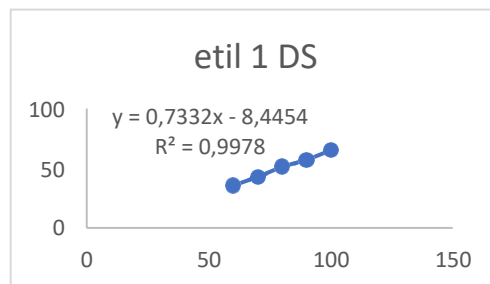
konsentrasi	% inhibisi	IC50
80	13,341	116,676
90	25,605	
100	34,149	
110	43,084	
120	53,035	



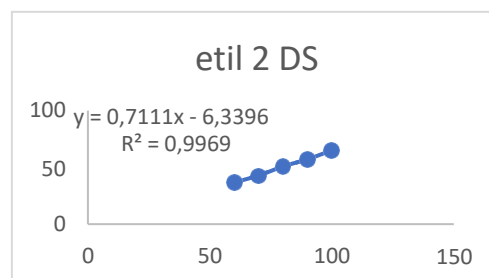
Pengukuran	Nilai IC50	Rata-Rata	STD
1	114,8245	115,53	1,00182
2	115,0868		
3	116,6760		

2. ekstrak etil asetat

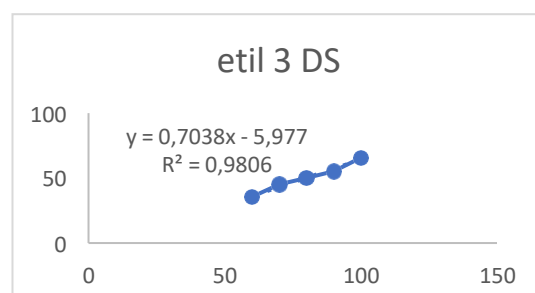
konsentrasi	% inhibisi	IC50
60	35,496	79,71277
70	42,595	
80	51,04	
90	56,916	
100	64,994	



konsentrasi	% inhibisi	IC50
60	36,72	79,2288
70	42,717	
80	51,163	
90	57,038	
100	65,116	



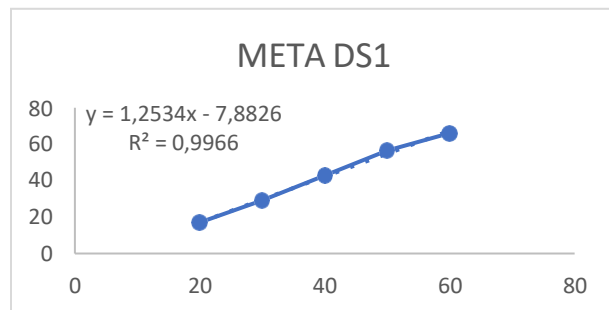
konsentrasi	% inhibisi	IC50
60	35,496	79,53538
70	45,165	
80	50,04	
90	55,324	
100	65,606	



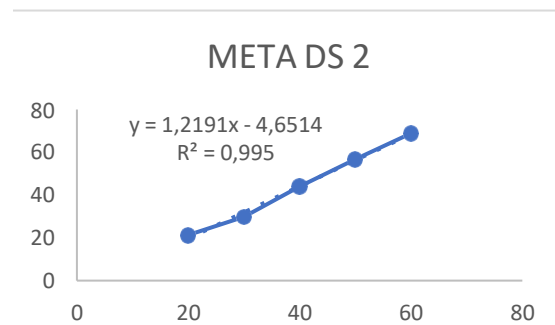
Pengukuran	Nilai IC50	Rata-Rata	STD
1	79,7128	79,49	0,24484
2	79,2288		
3	79,5354		

3. Ekstrak metanol

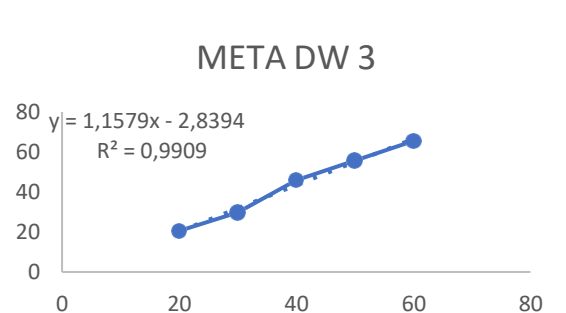
konsentrasi	% inhibisi	IC50
20	17,013	46,18334
30	29,009	
40	42,84	
50	56,426	
60	65,973	



konsentrasi	% inhibisi	IC50
20	21,297	44,8293
30	29,743	
40	44,064	
50	56,671	
60	68,788	



konsentrasi	% inhibisi	IC50
20	20,563	45,63382
30	29,743	
40	45,9	
50	55,692	
60	65,483	



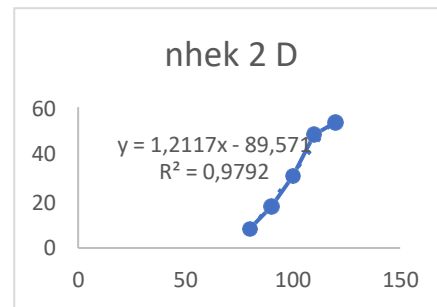
Pengukuran	Nilai IC50	Rata-Rata	STD
1	46,1833	45,55	0,68101
2	44,8293		

3	45,6338		
---	---------	--	--

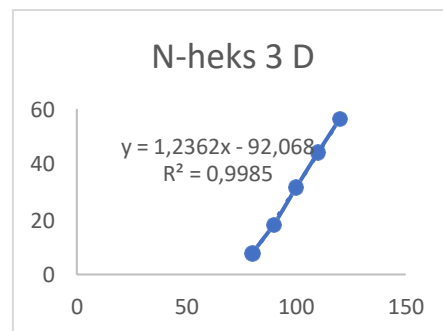
- Daun dewandaru

1. ekstrak N-heksana

80	8,690	
90	15,667	
100	30,233	118,366
110	41,86	
120	51,285	



80	8,201	
90	17,625	115,1861
100	30,477	
110	48,225	
120	53,488	

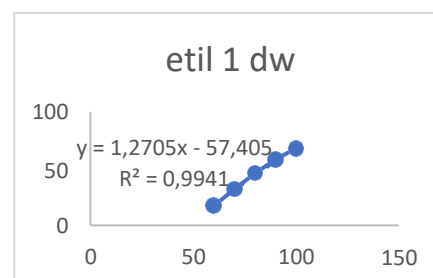


KONSENTRASI	INHIBISI	IC50
80	7,711	114,9232
90	17,993	
100	31,457	
110	44,186	
120	56,426	

Pengukuran	Nilai IC50	Rata-Rata	STD
1	118,3660	116,16	1,91631
2	115,1861		
3	114,9232		

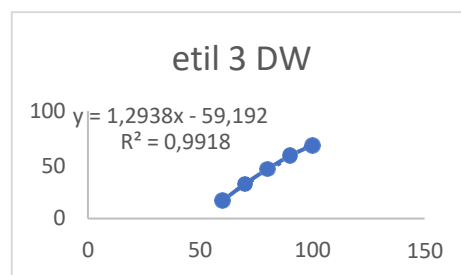
2. ekstrak etil asetat

konsentrasi	% inhibisi	IC50
60	17,258	84,53758
70	32,191	
80	45,9	
90	57,895	
100	67,931	



konsentrasi	% inhibisi	IC50
60	16,769	84,79004
70	32,191	
80	45,9	
90	56,793	
100	67,931	

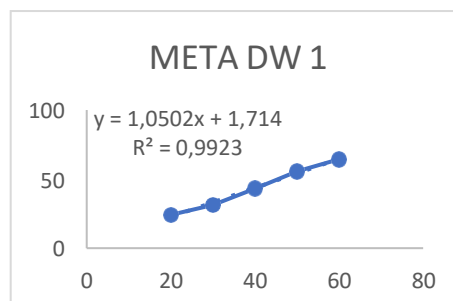
konsentrasi	% inhibisi	IC50
60	16,524	84,39635
70	32,313	
80	46,022	
90	58,629	
100	68,054	



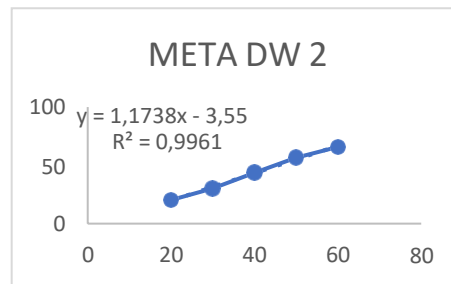
Pengukuran	Nilai IC50	Rata-Rata	STD
1	84,5376	84,57	0,19945
2	84,7900		
3	84,3964		

3. ekstrak metanol

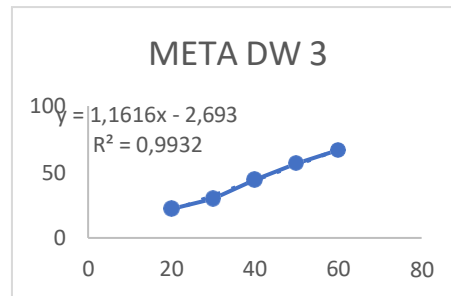
konsentrasi	% inhibisi	IC50
20	24,113	45,97791
30	31,212	
40	43,207	
50	55,692	
60	64,382	



konsentrasi	% inhibisi	IC50
20	20,318	45,62106
30	30,355	
40	43,819	
50	56,671	
60	65,851	



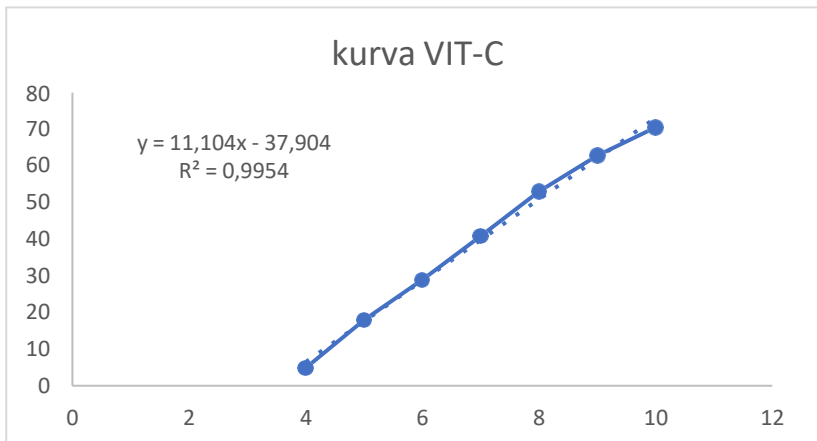
konsentrasi	% inhibisi	IC50
20	21,909	45,36243
30	29,743	
40	44,064	
50	56,548	
60	66,585	



Pengukuran	Nilai IC50	Rata-Rata	STD
1	45,9779	45,65	0,30904
2	45,6211		
3	45,3624		

- **Pembanding Vitamin-C**

Konsentrasi	Absorbansi	%Inhibisi	IC50
4	0.829	4.822	7.916
5	0.715	17.91	
6	0.619	28.932	
7	0.516	40.758	
8	0.409	53.042	
9	0.324	62.801	
10	0.257	70.494	



Rumus perhitungan IC₅₀

$$y = a + bx$$

Rumus % inhibisi

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

LAMPIRAN 6 PERHITUNGAN PENETAPAN KADAR FLAVONOID TOTAL

Hasil pengamatan

Nilai a = 0,0218

Nilai b = 0,0068

Nilai r = 0,9949

Konsentrasi = 500 µg/mL, Sampel = 5 mg/ 10 mL

Rumus : $= \frac{y+a}{b}$

Rumus % kadar flavonoid total = $\frac{\text{Konsentrasi} \times 10^{-3} \times \text{Volume}}{\text{Sampel}} \times 100\%$

- Daun jambu bol

Sampel	Konsentrasi	% kadar flavonoid
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,227+0,0218}{0,0068}$ $= 36,58 \text{ µg/mL}$	$= \frac{36,58 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,317\%$
N-heksana 500.2	$= \frac{y+a}{b}$ $= \frac{0,230+0,0218}{0,0068}$ $= 37,029 \text{ µg/mL}$	$= \frac{37,029 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,40 \%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,232+0,0218}{0,0068}$ $= 37,32 \text{ µg/mL}$	$= \frac{37,32 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,46\%$

Lanjutan lampiran

Sampel	Konsentrasi	% kadar flavonoid
Etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,332 + 0,0218}{0,0068}$ $= 52,029 \text{ µg/mL}$	$= \frac{52,02 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,40\%$
Etil asetat 500.2	$= \frac{y+a}{b}$	

	$= \frac{0,330+0,0218}{0,0068}$ $= 51,73 \mu\text{g/mL}$	$= \frac{51,73 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,40\%$
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,481+0,0218}{0,0068}$ $= 52,47 \mu\text{g/mL}$	$= \frac{52,47 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,49\%$

Sampel	Konsentrasi	% kadar flavonoid
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,406+0,0218}{0,0068}$ $= 62,91 \mu\text{g/mL}$	$= \frac{62,91 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 12,58\%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,451+0,0218}{0,0068}$ $= 69,52 \mu\text{g/mL}$	$= \frac{69,52 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 13,90 \%$
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,422+0,0218}{0,0068}$ $= 65,26 \mu\text{g/mL}$	$= \frac{65,26 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 13,05\%$

Lanjutan lampiran

- Daun salam

Sampel	Konsentrasi	% kadar flavonoid
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,360+0,0218}{0,0068}$ $= 56,14 \mu\text{g/mL}$	$= \frac{56,14 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,22\%$
N-heksana 500.2	$= \frac{y+a}{b}$	$= \frac{9,729 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$

	$= \frac{0,259 + 0,0218}{0,0068}$ $= 41,29 \text{ } \mu\text{g/mL}$	$= 8,25\%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,309+0,0218}{0,0068}$ $= 48,64 \text{ } \mu\text{g/mL}$	$= \frac{48,64 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,72\%$

Sampel	Konsentrasi	% kadar flavonoid
Etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,312+0,0218}{0,0068}$ $= 49,08 \text{ } \mu\text{g/mL}$	$= \frac{49,08 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,81\%$
Etil asetat 500.2	$= \frac{y+a}{b}$ $= \frac{0,376+0,0218}{0,0068}$ $= 58,50 \text{ } \mu\text{g/mL}$	$= \frac{37,85 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,70\%$
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,347+0,0218}{0,0068}$ $= 53,35 \text{ } \mu\text{g/mL}$	$= \frac{53,35 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,67 \%$

Sampel	Konsentrasi	% kadar flavonoid
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,351+0,0218}{0,0068}$ $= 54,82 \text{ } \mu\text{g/mL}$	$= \frac{46,28 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,96\%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,316+0,0218}{0,0068}$	$= \frac{49,67 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,935 \%$

	$= 49,67 \mu\text{g/mL}$	
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,322 + 0,0218}{0,0068}$ $= 50,55 \mu\text{g/mL}$	$= \frac{50,55 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,11\%$

- Daun dawandaru

Sampel	Konsentrasi	% kadar flavonoid
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,228 + 0,0218}{0,0068}$ $= 36,73 \mu\text{g/mL}$	$= \frac{36,73 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,34\%$
N-heksana 500.2	$= \frac{y+a}{b}$ $= \frac{0,228 + 0,0218}{0,0068}$ $= 38,05 \mu\text{g/mL}$	$= \frac{38,05 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,61\%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,244 + 0,0218}{0,0068}$ $= 39,08 \mu\text{g/mL}$	$= \frac{39,08 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,81\%$

Sampel	Konsentrasi	% kadar flavonoid
N-etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,306 + 0,0218}{0,0068}$ $= 48,20 \mu\text{g/mL}$	$= \frac{48,20 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,641\%$
Etil asetat 500.2	$= \frac{y+a}{b}$ $= \frac{0,318 + 0,0218}{0,0068}$	$= \frac{49,97 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,99 \%$

	=49,97 mg/mL	
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,312+0,0218}{0,0068}$ $= 49,08 \text{ mg/mL}$	$= \frac{49,08 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 9,81\%$

Sampel	Konsentrasi	% kadar flavonid
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,328+0,0218}{0,0068}$ $= 51,44 \text{ } \mu\text{g/mL}$	$= \frac{40 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 10,28\%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,328+0,0218}{0,0068}$ $= 51,73 \text{ } \mu\text{g/mL}$	$= \frac{51,73 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 10,34\%$
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,355+0,0218}{0,0068}$ $= 55,41 \text{ } \mu\text{g/mL}$	$= \frac{55,41 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 11,08\%$

LAMPIRAN 7 PERHITUNGAN PENETAPAN KADAR FENOLAT TOTAL
Hasil Pengamatan

Nilai b = 0.0068

Nilai a = 0.0218

Nilai r^2 = 0,9994

Konsentrasi n heksan, etil, dan metanol = 500 µg/mL, Sampel = 5 mg/ 10 mL

Rumus : $= \frac{y+a}{b}$

Rumus % kadar fenol = $\frac{\text{Konsentrasi} \times 10^{-3} \times \text{Volume}}{\text{Sampel}} \times 100\%$

• **Daun jambu bol**

Sampel	Konsentrasi	% kadar fenol
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,344+0,0411}{0,0102}$ $= 37,75 \text{ µg/mL}$	$= \frac{37,75 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 7,55\%$
N-heksana 500.2	$= \frac{y+a}{b}$ $= \frac{0,369+0,0411}{0,0102}$ $= 40,20 \text{ µg/mL}$	$= \frac{40,20 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 8,0411 \%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,378+0,0411}{0,0102}$ $= 41,08 \text{ µg/mL}$	$= \frac{41,08 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 8,217\%$

Sampel	Konsentrasi	% kadar fenol
Etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,484 + 0,0411}{0,0102}$ $= 51,48 \text{ µg/mL}$	$= \frac{51,48 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 10,295\%$
Etil asetat 500.2	$= \frac{y+a}{b}$	$= \frac{45,79 \times 0,001 \times 10 \text{ mL}}{5 \text{ mg}} \times 100$ $= 9,158\%$

	$= \frac{0,426+0,0411}{0,0102}$ $= 45,79 \mu\text{g/mL}$	
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,481+0,0411}{0,0102}$ $= 51,18 \mu\text{g/mL}$	$= \frac{51,18 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 10,23 \%$

Sampel	Konsentrasi	% kadar fenol
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,511+0,0411}{0,0102}$ $= 58,34 \mu\text{g/mL}$	$= \frac{58,34 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,668\%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,531+0,0411}{0,0102}$ $= 56,08\mu\text{g/mL}$	$= \frac{56,08 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,217 \%$
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,571+0,0411}{0,0102}$ $= 60 \mu\text{g/mL}$	$= \frac{60 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 12 \%$

- Daun salam

• Sampel	Konsentrasi	% kadar fenol
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,281+0,0411}{0,0102}$ $= 31,57 \mu\text{g/mL}$	$= \frac{31,57 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 6,314\%$
N-heksana 500.2	$= \frac{y+a}{b}$	$= \frac{32,85 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$

	$= \frac{0,294+0,0411}{0,0102}$ $= 32,85 \text{ } \mu\text{g/mL}$	$= 6,570\%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,256+0,0411}{0,0102}$ $= 29,12 \text{ } \mu\text{g/mL}$	$= \frac{29,12 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 5,825\%$

Sampel	Konsentrasi	% kadar fenol
N-etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,350 +0,0411}{0,0102}$ $= 38,34 \text{ } \mu\text{g/mL}$	$= \frac{38,34 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,668 \%$
Etil asetat 500.2	$= \frac{y+a}{b}$ $= \frac{0,345+0,0411}{0,0102}$ $=37,85 \text{ } \mu\text{g/mL}$	$= \frac{37,85 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 7,570\%$
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,347+0,0411}{0,0102}$ $= 38,04 \text{ } \mu\text{g/mL}$	$= \frac{38,04 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $=7,609 \%$

Sampel	Konsentrasi	% kadar fenol
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,431+0,0411}{0,0102}$ $= 46,28 \text{ } \mu\text{g/mL}$	$= \frac{46,28 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,256 \%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,443+0,0411}{0,0102}$	$= \frac{47,46 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,49 \%$

	$= 47,46 \mu\text{g/mL}$	
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,440 + 0,0411}{0,0102}$ $= 47,16 \mu\text{g/mL}$	$= \frac{47,16 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,433\%$

- **Daun dawandaru**

Sampel	Konsentrasi	% kadar fenol
N-heksana 500.1	$= \frac{y+a}{b}$ $= \frac{0,367 + 0,0411}{0,0102}$ $= 40 \mu\text{g/mL}$	$= \frac{40 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 8\%$
N-heksana 500.2	$= \frac{y+a}{b}$ $= \frac{0,378 + 0,0411}{0,0102}$ $= 41,08 \mu\text{g/mL}$	$= \frac{41,08 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 8,216 \%$
N-heksana 500.3	$= \frac{y+a}{b}$ $= \frac{0,392 + 0,0411}{0,0102}$ $= 42,46 \mu\text{g/mL}$	$= \frac{42,46 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 8,492\%$

Sampel	Konsentrasi	% kadar fenol
Etil asetat 500.1	$= \frac{y+a}{b}$ $= \frac{0,437 + 0,0411}{0,0102}$ $= 46,87 \mu\text{g/mL}$	$= \frac{46,87 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,374\%$
Etil asetat 500.2	$= \frac{y+a}{b}$ $= \frac{0,447 + 0,0411}{0,0102}$	$= \frac{47,85 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,57 \%$

	=47,85 µg/mL	
Etil asetat 500.3	$= \frac{y+a}{b}$ $= \frac{0,449+0,0411}{0,0102}$ $= 48,04 \text{ µg/mL}$	$= \frac{48,04 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 9,60 \%$

Sampel	Konsentrasi	% kadar fenol
Metanol 500.1	$= \frac{y+a}{b}$ $= \frac{0,554+0,0411}{0,0102}$ $= 58,34 \text{ µg/mL}$	$= \frac{40 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,668\%$
Metanol 500.2	$= \frac{y+a}{b}$ $= \frac{0,568+0,0411}{0,0102}$ $= 59,71 \text{ µg/mL}$	$= \frac{59,71 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 11,94 \%$
Metanol 500.3	$= \frac{y+a}{b}$ $= \frac{0,581+0,0411}{0,0102}$ $= 55,41\text{µg/mL}$	$= \frac{60,99 \times 0,001 \times 10\text{mL}}{5 \text{ mg}} \times 100$ $= 12,19\%$