

DAFTAR PUSTAKA

- Adresya, I. G. B. U., Dharmayudha, A. A. G. O., & Sudimartini, L. M. (2023). Identifikasi Senyawa Kimia Ekstrak Etanol 70% Daun Cemcem yang Tumbuh di Kota Denpasar. *Buletin Veteriner Udayana*, 15(5), 757-764.
- Asnani, A., Rahayu, W. P., Jenie, B. S. L., & Yuliana, N. D. (2017). Aktivitas Antibakteri dan Sitotoksitas Ekstrak Daun Kedondong Hutan. *Jurnal Teknologi dan Industri Pangan*, 28(2), 169-179.
- Astutiningsih, C., & Anggraeny, E. N. (2023). Penentuan Fenolik Total, Flavonoid Total, Aktivitas Antioksidan dan Nilai SPF Fraksi Buah Okra (*Abelmoschus esculentus L.*). *Cendekia Eksakta*, 8(1), 1-10
- Azizah, S., & Nursamsiar, N. S. (2019). Uji Aktivitas Antioksidan Ekstrak Etanol Daun Kedondong Hutan (*Spondias pinnata* (LF) Kurz.) dengan Berbagai Metode Uji. *Jurnal Ilmiah Manuntung*, 5(1), 91-96.
- Delina, S., & Arina, Y. (2022). Uji Aktivitas Antibakteri dari Fraksi Daun Kedondong Bangkok (*Spondias dulcis* Forst.). *Jurnal'Aisyiyah Medika*, 7(2), 157-169.
- Furi, M., Al Basit, N., Ikhtiarudin, I., & Utami, R. (2020). Penentuan Total Fenolik, Flavonoid dan Uji Aktivitas Antioksidan Ekstrak dan Fraksi Daun Kedabu (*Sonneratia ovata* Backer). *Jurnal Farmasi Indonesia*, 12(1), 48-59.
- Guimarães, A. L., De Oliveira, A. P., dos Santos Silva, G. S. F., Bezerra, G. S., Sousa, I., da Silva Almeida, J. R. G., ... & da Cruz Araujo, E. C. (2018). Gas Chromatographymass Spectrometry (GC-MS) Analysis of The Constituents of The Fixed Oils Obtained From The Barks, Leaves and Stems Of *Spondias Tuberosa* Arruda (Anacardiaceae). *Journal of Medicinal Plants Research*, 12(8), 89-95.
- Hadisaputri, Y. E., Habibah, U., Abdullah, F. F., Halimah, E., Mutakin, M., Megantara, S., ... & Diantini, A. (2021). Antiproliferation Activity and Apoptotic Mechanism Of Soursop (*Annona muricata L.*) Leaves Extract and Fractions on MCF7 Breast Cancer Cells. *Breast Cancer: Targets and Therapy*, 13, 447-457.
- Herdiana, I., & Aji, N. (2020). Fraksinasi Ekstrak Daun Sirih dan Ekstrak Gambir serta Uji Antibakteri *Streptococcus mutans*. *Jurnal Ilmiah Kesehatan*, 19(03), 100-106.
- Indriana, L. P. A., & Feliani, N. T. (2021). Potensi Metode Two-Step Desolvation dalam Sintesis Nanopartikel Gelatin Senyawa Antioksidan. *Pasundan Food Technology Journal (PFTJ)*, 8(3), 69-77.
- Mishu, T. R., Mishu, T. R., & Reza, H. M. (2014). Antioxidant and Activities of *Spondias pinnata* Kurz. leaves. *European Journal Plants*, 4(2), 183-195.
- N, N., Milasari, N., Kumalasari, E., & Febrianti, D. R. (2024). ed Extracts (*Parsea americana* Mill.) Bioactive Compounds Source of Antioxidants. *Indonesian Journal of Pharmaceutical Technology*, 5(2), 152-162.



- Khiya, Z., Oualcadi, Y., Gamar, A., Berrekhis, F., Zair, T., & Hilali, F. E. (2021). Correlation of Total Polyphenolic Content With Antioxidant Activity Of Hydromethanolic Extract and Their Fractions of The *Salvia Officinalis* Leaves From Different Regions Of Morocco. *Journal of Chemistry*, 1, 1-11.
- Khoiriyah, S., Hanapo, A., & Fasya, A. G. (2014). Uji Fitokimia dan Aktivitas Antibakteri Fraksi Etil Asetat, Kloroform dan Petroleum Eter Ekstrak Metanol Alga Coklat *Sargassum vulgare* dari Pantai Kapong Pamekasan Madura. *Alchemy*, 3(2), 133-144.
- Laksemi, D. A. A. S. (2019). Biological Activity of *Spondias pinnata*: A Review. *Indonesia Journal of Biomedical Science*, 13(2), 88-93.
- Lalopua, V. M. (2020). Rendemen Ekstrak Kasar dan Fraksi Pelarut Alga Merah (*Kappaphycus alvarezii* Doty). *Majalah Biam*, 16(1), 1-5.
- Musdalipah, M., Murtafia, M., Nurhikma, E., Daud, N. S., Rusli, N., Yodha, A. W. M., ... & Alam, S. (2023). Pelatihan Pembuatan Biskuit dari Daun Kedondong Hutan (*Spondias pinnata* (Linn. F.) Kurz) Sebagai Cemilan Antidiabetes pada Masyarakat Desa Kasumewuho. *Jurnal Abdi dan Dedikasi kepada Masyarakat Indonesia*, 1(2), 59-71
- Mondal, S., Bhar, K., Panigrahi, N., Mondal, P., Nayak, S., Barik, R. P., & Aravind, K. (2021). A Tangy Twist Review On Hog-Plum: *Spondias pinnata* (Lf) Kurz. *Journal Of Natural Remedies*, 21(1), 1-25
- Natsir, M., Pratiwi, A. M., Azis, T., Harlis, W. O., Bijang, C., & Nurliana, L. (2022). Efektivitas Fotodegradasi Lignin dari Limbah Ampas Sagu (*Metroxylon sagu* Rottb.) Menggunakan Katalis TiO₂. *KOVALEN: Jurnal Riset Kimia*, 8(3), 258-265.
- Pinarsi, E., & Syukrilla, G. (2021). Uji Aktivitas Antibakteri Fraksi N-heksan, Etil Asetat dan Air Daun Leunca (*Solanum Nigrum* L) Terhadap Bakteri (*Staphylococcus aureus* dan *Escherichia coli*). *Indonesia Natural Research Pharmaceutical Journal*, 6(1), 11-20.
- Rangga, F. A., Amarantini, C., & Budiarso, T. Y. (2024). Uji Antibakteri Ekstrak Daun Kedondong Hutan (*Spondias pinnata*) Terhadap *Salmonella typhi*. *Jurnal Ilmu Dasar*, 25(1), 33-40
- Ramadhan, M. F., Supriani, S., Supriani, W. Y. S., Khotimah, K., & Setyaningsih, M. (2024). Uji Fitokimia Ekstrak Etanol 96% dan Fraksi Air, Fraksi Kloroform serta Fraksi N-Hexana Rimpang Kunyit (*Curcuma Longa* L). *Jurnal Farmasetis*, 13(2), 71-78.
- Safitri, M. A. C., Putri, A. E., & Tilarso, D. P. (2020). Uji Aktivitas Antibakteri Fraksi Batang Papaya (*Carica papaya* Linn.) terhadap Bakteri *Escherichia coli* Secara In Vitro. *Jurnal Sains dan Kesehatan*, 2(4), 452-457.
- I, A., & Dhanardhono, T. (2019). Aktivitas Antibakteri Ekstrak dong Laut Terhadap Pertumbuhan *Staphylococcus aureus* isilin. *Jurnal Kedokteran Diponegoro*, 8(1), 580-587



- Satpathy, G., Tyagi, Y. K., & Gupta, R. K. (2011). Preliminary Evaluation of Nutraceutical and Therapeutic Potential Of Raw *Spondias Pinnata* K., An Exotic Fruit Of India. *Food Research International*, 44(7), 2076-2087.
- Sembiring, E. N., Elya, B., & Sauriasari, R. (2018). Phytochemical Screening, Total Flavonoid and Total Phenolic Content and Antioxidant Activity Of Different Parts Of *Caesalpinia bonduc* (L.) Roxb. *Pharmacognosy Journal*, 10(1), 123-127.
- Susmayanti, W., & Rahmadani, A. (2023). Uji Aktivitas Antioksidan Fraksi Daun Melinjo (*Gnetum Gnenom* L.) Menggunakan Metode CUPRAC (*Cupric Ion Reducing Antioxidant Capacity*). *Indonesian Journal of Pharmacy and Natural Product*, 6(1), 97-106.
- Sylvia, D., Anggraeni, A. P., & Pratiwi, D. (2020). Aktivitas Antioksidan Ekstrak Etanol dan Fraksi Etanol-Air Umbi Kimpul Putih (*Xanthosoma Sagitafolium* L.) Dengan Metode DPPH. *Jurnal Farmamedika (Pharmamedika Journal)*, 5(1), 21-29.
- Wahdaningsih, S., Nugraha, F., Kurniawan, H., Marselia, A., & Sari, D. N. (2022). Identifikasi Gugus Fungsi Fraksi Etil Asetat dan Fraksi n-Heksan *Hylocereus polyrhizus* (FAC Weber) Britton & Rose. *Jurnal Pharmascience*, 9(1), 113-123.



LAMPIRAN

Lampiran 1. Hasil Determinasi Tanaman



LABORATORIUM BOTANI DEPARTEMEN BIOLOGI
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS HASANUDDIN, KAMPUS TAMALANREA
JL. PERINTIS KEMERDEKAAN KM. 10 TLP. (0411) 585466, Fax: 620411 MAKASSAR 90915

Nomor : 012/UN4.11.9/BIO-BOT/PL-03/2023
 Hal : Identifikasi dan Klasifikasi Tanaman

Nama : Iffa Khaerani Azizah
 NIM : G031201003
 Prodi : Ilmu dan Teknologi Pangan
 Instansi : Fakultas Pertanian Universitas Hasanuddin

Identifikasi Tanaman Raungngecceng *Spodias pinnata* (L.f.) Kurz., yaitu:

Habitus pohon, berakar tunggang, batang bulat bercabang-cabang, kulit batang tua berwarna coklat ada lentisel berbintik-bintik, batang muda berwarna hijau, ada bekas ibu tangkai daun pada cabang/batang. Daun majemuk menyirip gasal, jumlah anak daun 11-15 lembar . Duduk daun tersebar dengan rumus 2/5. Bangun anak daun bulat telur-oval, ujung daun meruncing, tepi daun rata, pertulangan daun menyirip, permukaan daun licin, warna daun permukaan atas berwarna hijau tua dan permukaan daun bawah berwarna hijau muda. Pangkal daun membulat, daun muda / pucuk daun berwarna coklat kemerahan, daun setelah dewasa berwarna hijau, daging daun yang muda lunak, jika diremas mengeluarkan lendir dan aroma yang segar seperti mangga- manggaan (Anacardiaceae). Lokasi pengambilan sampel tanaman berasal dari Desa Pattiro Deceng, Kecamatan Camba, Kabupaten Maros, Sulawesi Selatan. Nama daerah/lokal sampel Tanaman Raungngecceng. Raung atinya Daun Ngecceng.

Klasifikasi Tanaman Raungngecceng *Spodias pinnata* (L.f.) Kurz., yaitu:

Regnum	: Plantae
Divisio	: Spermatophyta
Subdivisio	: Angiospermae
Classis	: Dicotyledoneae
Subclassis	: Dialypetalae
Ordo	: Sapindales
Familia	: Anacadiaceae
Genus	: <i>Spodias</i>
Species	: <i>Spodias pinnata</i> (L.f.) Kurz.

Makassar, 14 November 2023

Pembuat Identifikasi,

Dr. Els Tambaru, M.Si.
 NIP 196301021990022001



Lampiran 2. Data Hasil Penelitian Jumlah Rendemen

- Rendemen Hasil Ekstraksi

No.	Pelarut	Replikasi	Berat Simplisia (g)	Berat Ekstrak (g)
1	Etanol	1	80	10
		2	80	10
		3	80	11

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

- Ulangan 1

$$\% \text{Rendemen} = \frac{10}{80} \times 100\% = 12.5\%$$

- Ulangan 2

$$\% \text{Rendemen} = \frac{10}{80} \times 100\% = 12.5\%$$

- Ulangan 3

$$\% \text{Rendemen} = \frac{11}{80} \times 100\% = 13.75\%$$

No.	Pelarut	Replikasi	Rendemen (%)	Rata-rata Rendemen (%)
1	Etanol	1	12.5	12.92
		2	12.5	
		3	13.75	



- Rendemen Hasil Fraksinasi

No.	Jenis Pelarut	Replikasi	Berat Ekstrak (g)	Berat Fraksi (g)
1	N-heksan	1	10	0.65
		2	10	0.6
		3	10	0.71
2	Kloroform	1	10	0.04
		2	10	0.06
		3	10	0.06
3	Etil Asetat	1	10	1.29
		2	10	1.35
		3	10	1.47
4	Air	1	10	1.91
		2	10	2.14
		3	10	1.89

$$\% \text{Rendemen fraksi} = \frac{\text{Berat fraksi (g)}}{\text{Berat ekstrak (g)}} \times 100\%$$

- N-heksan Ulangan 1

$$\% \text{Rendemen fraksi} = \frac{0.65}{10} \times 100 = 6.5\%$$
- N-heksan Ulangan 2

$$\% \text{Rendemen fraksi} = \frac{0.6}{10} \times 100 = 6\%$$
- N-heksan Ulangan 3

$$\% \text{Rendemen fraksi} = \frac{0.71}{10} \times 100 = 7.1\%$$
- Kloroform Ulangan 1

$$\% \text{Rendemen fraksi} = \frac{0.04}{10} \times 100 = 0.4\%$$
- Kloroform Ulangan 2

$$\% \text{Rendemen fraksi} = \frac{0.06}{10} \times 100 = 0.6\%$$
- Kloroform Ulangan 3

$$\% \text{Rendemen fraksi} = \frac{0.06}{10} \times 100 = 0.6\%$$
- Etil Asetat Ulangan 1

$$\% \text{Rendemen fraksi} = \frac{1.29}{10} \times 100 = 12.9\%$$



- Etil Asetat Ulangan 2

$$\% \text{Rendemen fraksi} = \frac{1.35}{10} \times 100 = 13.5\%$$
- Etil Asetat Ulangan 3

$$\% \text{Rendemen fraksi} = \frac{1.47}{10} \times 100 = 14.7\%$$
- Air Ulangan 1

$$\% \text{Rendemen fraksi} = \frac{1.91}{10} \times 100 = 19.1\%$$
- Air Ulangan 2

$$\% \text{Rendemen fraksi} = \frac{2.14}{10} \times 100 = 21.4\%$$
- Air Ulangan 3

$$\% \text{Rendemen fraksi} = \frac{1.89}{10} \times 100 = 18.9\%$$

No.	Jenis Pelarut	Replikasi	Rendemen (%)	Rata-rata Rendemen (%)	Standar Deviasi
1	N-heksan	1	6.5	6.53	0.55
		2	6		
		3	7.1		
2	Kloroform	1	0.4	0.53	0.12
		2	0.6		
		3	0.6		
3	Etil Asetat	1	12.9	13.70	0.92
		2	13.5		
		3	14.7		
4	Air	1	19.1	19.80	1.39
		2	21.4		
		3	18.9		



Lampiran 3. Hasil Uji Statistik Jumlah Rendemen

ANOVA

Dependent Variable: Rendemen

Source	Type III Sum of		Mean Square	F	Sig.
	Squares	df			
Corrected Model	634.903 ^a	5	126.981	148.612	.000
Intercept	1234.241	1	1234.241	1444.495	.000
Perlakuan	633.856	3	211.285	247.278	.000
Ulangan	1.047	2	.523	.612	.573
Error	5.127	6	.854		
Total	1874.270	12			
Corrected Total	640.029	11			

a. R Squared = .992 (Adjusted R Squared = .985)

Lampiran 4. Hasil Uji lanjut Duncan Rendemen

Rendemen

Duncan^{a,b}

Perlakuan	N	Subset			
		1	2	3	4
Kloroform	3	.533			
N-heksan	3		6.533		
Etil Asetat	3			13.700	
Air	3				19.800
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .854.

n Sample Size = 3.000.



Lampiran 5. Data Hasil Penelitian Akvitias Antioksidan

- N-heksan Ulangan 1

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.603	0.649	7.09
50	0.589	0.649	9.24
100	0.552	0.649	14.95
250	0.393	0.649	39.45
IC50		325.93	

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.603}{0.649} \times 100 = 7.09\%$$

- Konsentrasi 50 ppm

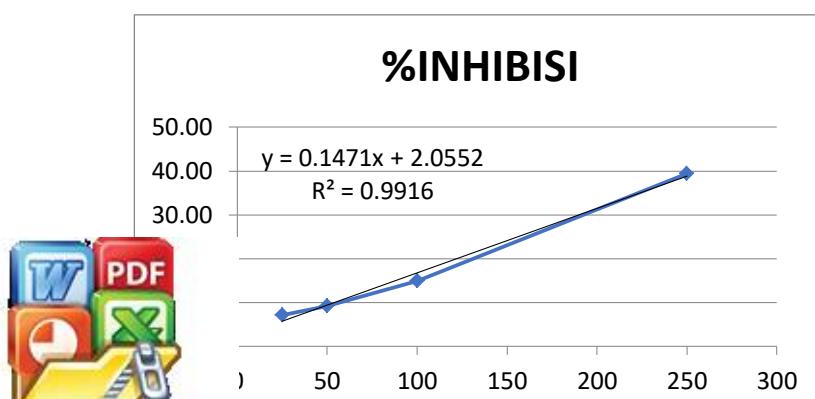
$$\% \text{Inhibisi} = \frac{0.649 - 0.589}{0.649} \times 100 = 9.24\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.552}{0.649} \times 100 = 14.95\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.393}{0.649} \times 100 = 39.45\%$$



- N-heksan Ulangan 2

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.61	0.649	6.01
50	0.536	0.649	17.41
100	0.512	0.649	21.11
250	0.387	0.649	40.37
IC50			314.74

$$\% \text{Inhibisi} = \frac{\text{AB} - \text{AS}}{\text{AB}} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.610}{0.649} \times 100 = 6.01\%$$

- Konsentrasi 50 ppm

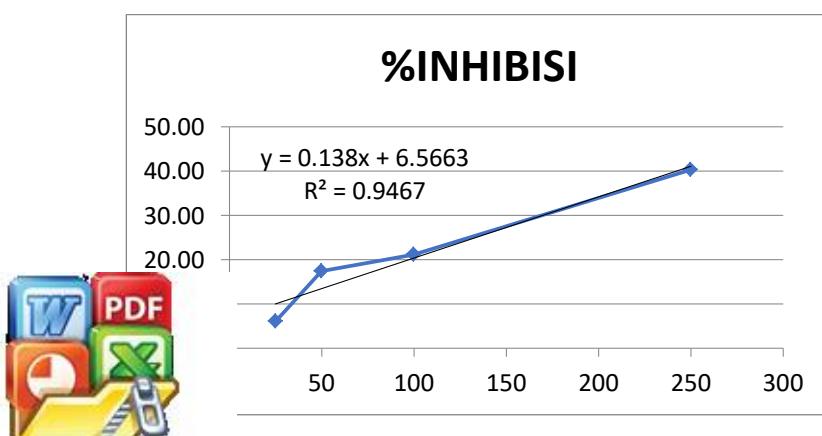
$$\% \text{Inhibisi} = \frac{0.649 - 0.536}{0.649} \times 100 = 17.41\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.512}{0.649} \times 100 = 21.11\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.387}{0.649} \times 100 = 40.37\%$$



- N-heksan Ulangan 3

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.621	0.649	4.31
50	0.576	0.649	11.25
100	0.507	0.649	21.88
250	0.389	0.649	40.06
IC50			307.29

$$\% \text{Inhibisi} = \frac{\text{AB} - \text{AS}}{\text{AB}} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.621}{0.649} \times 100 = 4.31\%$$

- Konsentrasi 50 ppm

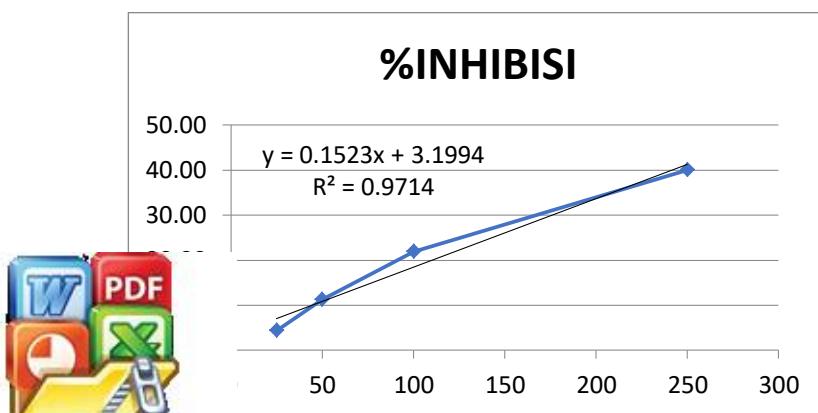
$$\% \text{Inhibisi} = \frac{0.649 - 0.576}{0.649} \times 100 = 11.25\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.507}{0.649} \times 100 = 21.88\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.389}{0.649} \times 100 = 40.06\%$$



- Kloroform Ulangan 1

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.557	0.649	14.18
50	0.485	0.649	25.27
100	0.406	0.649	37.44
250	0.134	0.649	79.35
IC50			145.03

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.557}{0.649} \times 100 = 14.18\%$$

- Konsentrasi 50 ppm

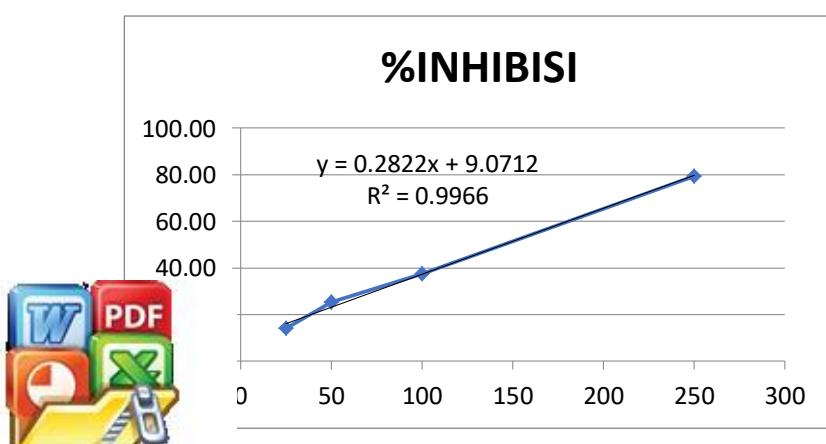
$$\% \text{Inhibisi} = \frac{0.649 - 0.485}{0.649} \times 100 = 25.27\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.406}{0.649} \times 100 = 37.44\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.134}{0.649} \times 100 = 79.35\%$$



- Kloroform Ulangan 2

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.58	0.649	10.63
50	0.484	0.649	25.42
100	0.415	0.649	36.06
250	0.152	0.649	76.58
	IC50		152.30

$$\% \text{Inhibisi} = \frac{\text{AB} - \text{AS}}{\text{AB}} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.580}{0.649} \times 100 = 10.63\%$$

- Konsentrasi 50 ppm

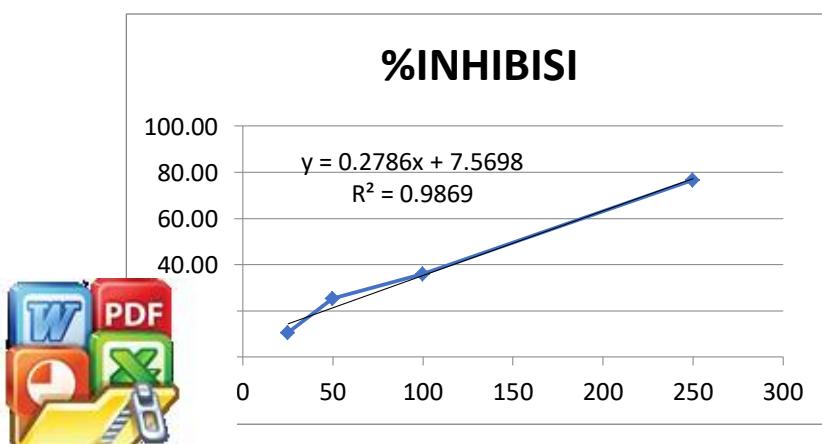
$$\% \text{Inhibisi} = \frac{0.649 - 0.484}{0.649} \times 100 = 25.42\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.415}{0.649} \times 100 = 36.06\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.152}{0.649} \times 100 = 76.58\%$$



- Kloroform Ulangan 3

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.561	0.649	13.56
50	0.474	0.649	26.96
100	0.4	0.649	38.37
250	0.151	0.649	76.73
	IC50		147.62

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.561}{0.649} \times 100 = 13.56\%$$

- Konsentrasi 50 ppm

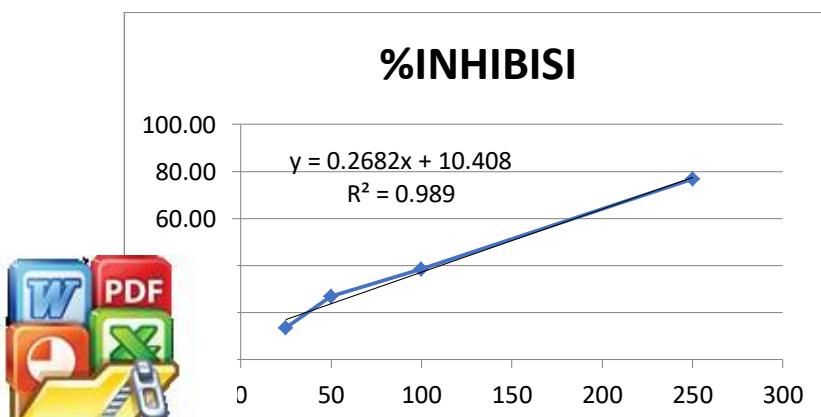
$$\% \text{Inhibisi} = \frac{0.649 - 0.474}{0.649} \times 100 = 26.96\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.400}{0.649} \times 100 = 38.37\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.649 - 0.151}{0.649} \times 100 = 76.73\%$$



- Etil Asetat Ulangan 1

Konsentrasi	Absorbansi	Kontrol	Inhibis %
25	0.512	0.669	23.47
50	0.391	0.669	41.55
100	0.208	0.669	68.91
250	0.03	0.669	95.52
IC50			81.48

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.512}{0.669} \times 100 = 23.47\%$$

- Konsentrasi 50 ppm

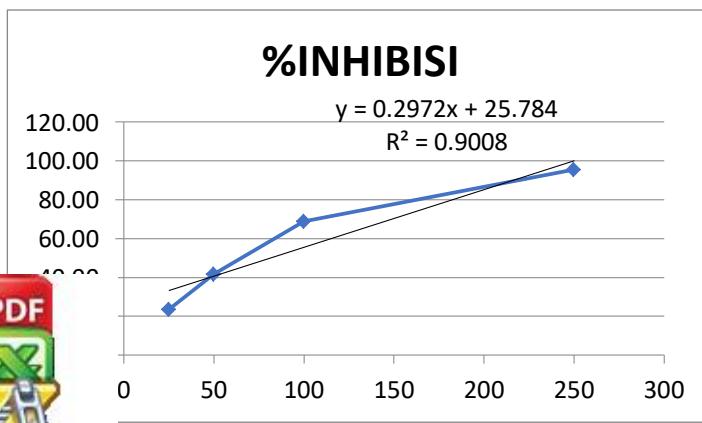
$$\% \text{Inhibisi} = \frac{0.669 - 0.391}{0.669} \times 100 = 41.55\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.208}{0.669} \times 100 = 68.91\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.030}{0.669} \times 100 = 95.52\%$$



- Etil Asetat Ulangan 2

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.5	0.669	25.26
50	0.362	0.669	45.89
100	0.227	0.669	66.07
250	0.027	0.669	95.96
	IC50		77.36

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.500}{0.669} \times 100 = 25.26\%$$

- Konsentrasi 50 ppm

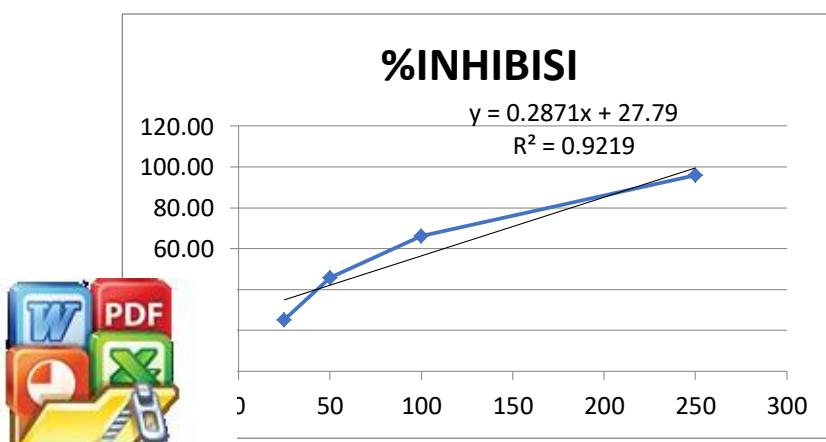
$$\% \text{Inhibisi} = \frac{0.669 - 0.362}{0.669} \times 100 = 45.89\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.227}{0.669} \times 100 = 66.07\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.027}{0.669} \times 100 = 95.96\%$$



- Etil Asetat Ulangan 3

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.504	0.669	24.66
50	0.391	0.669	41.55
100	0.225	0.669	66.37
250	0.037	0.669	94.47
	IC50		82.89

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.504}{0.669} \times 100 = 24.66\%$$

- Konsentrasi 50 ppm

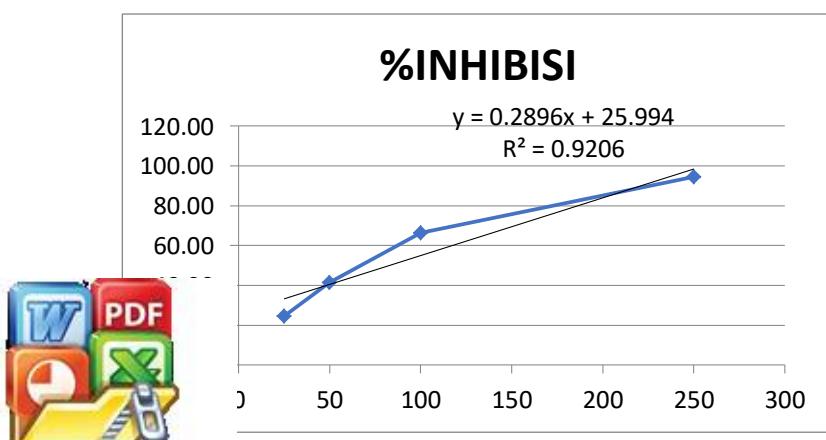
$$\% \text{Inhibisi} = \frac{0.669 - 0.391}{0.669} \times 100 = 41.55\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.225}{0.669} \times 100 = 66.37\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.669 - 0.037}{0.669} \times 100 = 94.47\%$$



- Air ulangan 1

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.483	0.562	14.06
50	0.377	0.562	32.92
100	0.329	0.562	41.46
250	0.182	0.562	67.62
	IC50		158.05

$$\% \text{Inhibisi} = \frac{AB - AS}{AB} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.483}{0.562} \times 100 = 14.06\%$$

- Konsentrasi 50 ppm

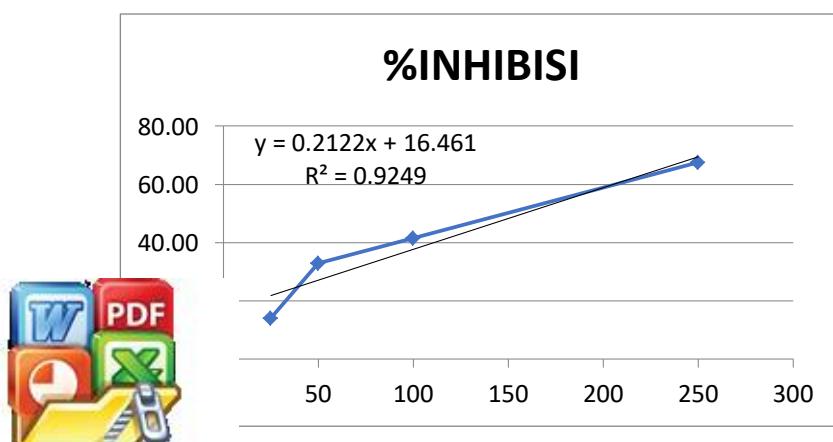
$$\% \text{Inhibisi} = \frac{0.562 - 0.377}{0.562} \times 100 = 32.92\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.329}{0.562} \times 100 = 41.46\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.182}{0.562} \times 100 = 67.62\%$$



- Air Ulangan 2

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.491	0.562	12.63
50	0.431	0.562	23.31
100	0.346	0.562	38.43
250	0.187	0.562	66.73
	IC50		170.21

$$\% \text{Inhibisi} = \frac{\text{AB} - \text{AS}}{\text{AB}} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.491}{0.562} \times 100 = 12.63\%$$

- Konsentrasi 50 ppm

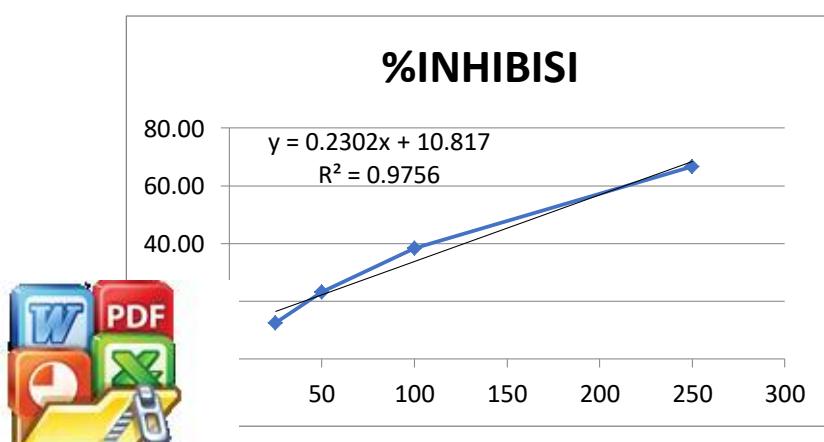
$$\% \text{Inhibisi} = \frac{0.562 - 0.431}{0.562} \times 100 = 23.31\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.346}{0.562} \times 100 = 38.43\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.187}{0.562} \times 100 = 66.73\%$$



- Air Ulangan 3

Konsentrasi	Absorbansi	Kontrol	%Inhibisi
25	0.462	0.562	17.79
50	0.426	0.562	24.20
100	0.343	0.562	38.97
250	0.19	0.562	66.19
	IC50		168.50

$$\% \text{Inhibisi} = \frac{\text{AB} - \text{AS}}{\text{AB}} \times 100\%$$

- Konsentrasi 25 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.462}{0.562} \times 100 = 17.79\%$$

- Konsentrasi 50 ppm

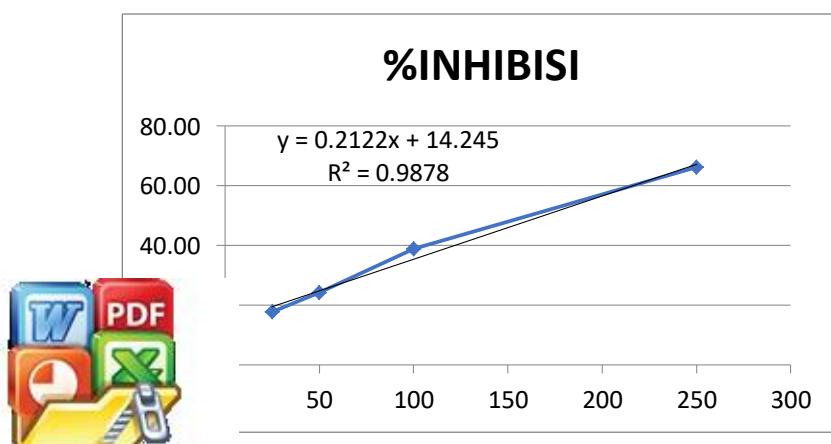
$$\% \text{Inhibisi} = \frac{0.562 - 0.426}{0.562} \times 100 = 24.20\%$$

- Konsentrasi 100 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.343}{0.562} \times 100 = 38.97\%$$

- Konsentrasi 250 ppm

$$\% \text{Inhibisi} = \frac{0.562 - 0.190}{0.562} \times 100 = 66.19\%$$



No.	Jenis Pelarut	Replikasi	IC ₅₀ (ppm)	Rata-rata IC ₅₀ (ppm)
1	N-heksan	1	325.93	315.99
		2	314.74	
		3	307.29	
2	Kloroform	1	145.03	148.32
		2	152.30	
		3	147.62	
3	Etil Asetat	1	81.48	80.58
		2	77.36	
		3	82.89	
4	Air	1	158.05	165.59
		2	170.21	
		3	168.50	

Lampiran 6. Hasil Uji Statistik Aktivitas Antioksidan

ANOVA

Dependent Variable: IC50

Source	Type III Sum of		Mean Square	F	Sig.
	Squares	df			
Corrected Model	88707.320 ^a	5	17741.464	357.502	.000
Intercept	378572.163	1	378572.163	7628.483	.000
Perlakuan	88698.688	3	29566.229	595.779	.000
Ulangan	8.632	2	4.316	.087	.918
Error	297.757	6	49.626		
Total	467577.241	12			
Corrected Total	89005.077	11			

a. R Squared = .997 (Adjusted R Squared = .994)



Optimized using
trial version
www.balesio.com

Lampiran 7. Hasil Uji lanjut Duncan Aktivitas Antioksidan

ANTIOKSIDAN

Duncan^{a,b}

Perlakuan	N	Subset			
		1	2	3	4
Etil Asetat	3	80.5767			
Kloroform	3		148.3167		
Air	3			165.5867	
N-heksan	3				315.9867
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 49.626.

a. Uses Harmonic Mean Sample Size = 3.000.

b. Alpha = 0.05.

Lampiran 8. Data Hasil Penelitian Akvitias Antibakteri

- Bakteri *E.coli*

Perlakuan	Ulangan	Diameter Zona Bening	K-	Zona Hambat	Rata-Rata
N-heksan	1	18.1	5.9	12.2	11.5
	2	16.3	5.9	10.4	
	3	17.9	5.9	12	
Kloroform	1	17.2	5.9	11.3	10.9
	2	16.7	5.9	10.8	
	3	16.6	5.9	10.7	
Etil Asetat	1	13.6	5.9	7.7	10.4
	2	19	5.9	13.1	
	3	16.3	5.9	10.4	
	1	11.9	5.9	6	8.6
	2	17.2	5.9	11.3	
	3	14.3	5.9	8.4	
		16.9	5.9	11	

- Bakteri *S.aureus*

Perlakuan	Ulangan	Diameter Zona Bening	K-	Zona Hambat	Rata-Rata
N-heksan	1	12.9	5.9	7	9.3
	2	17	5.9	11.1	
	3	15.6	5.9	9.7	
Kloroform	1	18.3	5.9	12.4	11.8
	2	18.9	5.9	13	
	3	16	5.9	10.1	
Etil Asetat	1	17.6	5.9	11.7	11.1
	2	17.1	5.9	11.2	
	3	16.3	5.9	10.4	
Air	1	17	5.9	11.1	10
	2	14.2	5.9	8.3	
	3	16.5	5.9	10.6	
K+	-	21.3	5.9	15.4	15.4

Lampiran 9. Hasil Uji Statistik Aktivitas Antibakteri

- Bakteri *E.coli*

ANOVA

Dependent Variable: ZonaHambat

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	23.591 ^a	5	4.718	1.287	.379
Intercept	1287.541	1	1287.541	351.174	.000
Perlakuan	14.769	3	4.923	1.343	.346
Ulangan	8.822	2	4.411	1.203	.364
Error	21.998	6	3.666		
Total	1333.130	12			
Corrected Total	45.589	11			

.adjusted R Squared = .115)



- Bakteri *S.aureus*

ANOVA

Dependent Variable: ZonaHambat

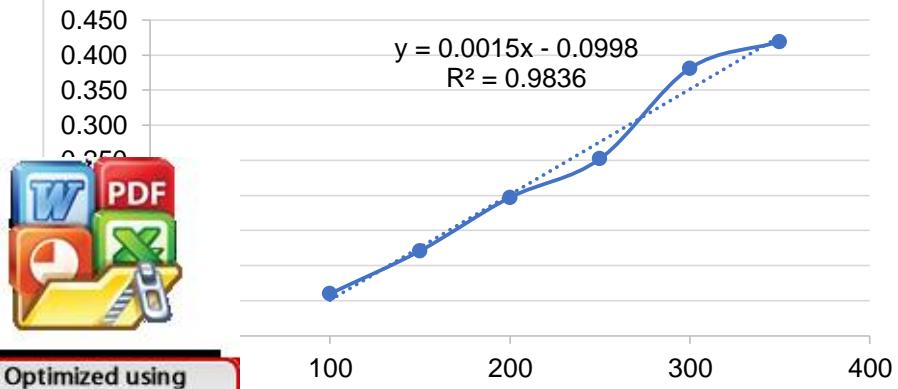
Source	Type III Sum of		Mean Square	F	Sig.
	Squares	df			
Corrected Model	12.677 ^a	5	2.535	.859	.557
Intercept	1335.630	1	1335.630	452.415	.000
Perlakuan	11.697	3	3.899	1.321	.352
Ulangan	.980	2	.490	.166	.851
Error	17.713	6	2.952		
Total	1366.020	12			
Corrected Total	30.390	11			

a. R Squared = .417 (Adjusted R Squared = -.069)

Lampiran 10. Data Hasil Penelitian Total Fenolik

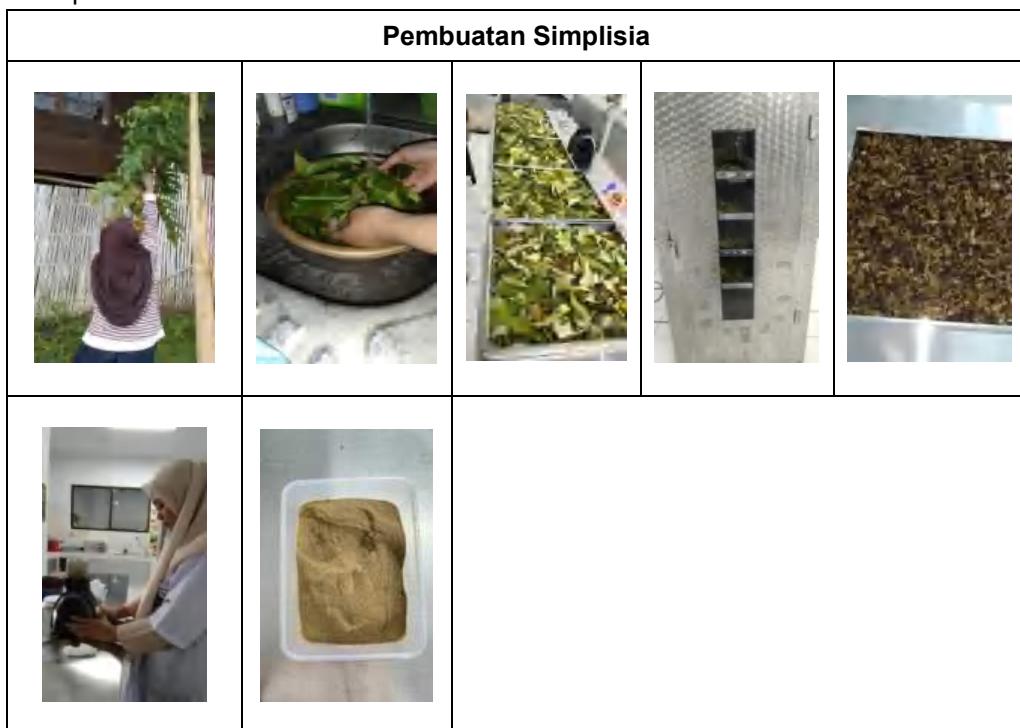
Panjang gelombang	Konsentrasi ($\mu\text{g/mL}$)	Absorbansi
782	100	0.060
	150	0.121
	200	0.197
	250	0.252
	300	0.381
	350	0.419

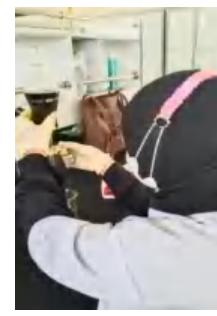
Kurva Standar Total Fenolik



Sampel	Absorbansi	Berat Sampel	FP	Konsentrasi ($\mu\text{g}/\text{ml}$)	Total Fenol dalam 0,1 gr (μg)	Total Fenol mg GAE/g
Etil Asetat	0.235	0.1	21	1892.800	39748.800	397.49
	0.243	0.1	21	2004.800	42100.800	421.01
	0.232	0.1	21	1850.800	38866.800	388.67

Lampiran 11. Dokumentasi Penelitian



Ekstraksi			
			
Fraksinasi			
			
			

Antioksidan			
			
			
Antibakteri			
			
			



Total Fenolik			
FT-IR		GC-MS	
			



Optimized using
trial version
www.balesio.com

Lampiran 12. Riwayat Hidup Peneliti

CURRICULUM VITAE



A. DATA PRIBADI

Nama	:	Iffa Khaerani Azizah
NIM	:	G031201003
Tempat, Tanggal Lahir	:	Camba, 11 September 2002
Agama	:	Islam
Jenis Kelamin	:	Perempuan
Suku	:	Bugis
Alamat	:	BTP Blok H Lama, No. 412
Kewarganegaraan	:	Warga Negara Indonesia
E-mail	:	iffakhaerani@gmail.com
No. Handphone	:	088247000907

B. RIWAYAT PENDIDIKAN

- SDN 101 Inpres Ujung (2008-2014)
- SMPN 3 Camba (2014-2017)
- SMAN 3 Maros (2017-2020)
- S1 Program Studi Ilmu dan Teknologi Pangan UNHAS (2020-2024)

C. PEKERJAAN DAN RIWAYAT PEKERJAAN

Jenis Pekerjaan	:	Mahasiswa
NIP atau Identitas lain (NIK)	:	7309025109020001
Pangkat/Jabatan	:	-

