

DAFTAR PUSTAKA

- Abdel-Hameed, E.-S. S., Bazaid, S. A., Shohayeb, M. M., El-Sayed, M. M., El-Wakil, E. A. 2012. Phytochemical Studies and Evaluation of Antioxidant, Anticancer and Antimicrobial Properties of *Conocarpus erectus* L. Growing in Taif, Saudi Arabia. *European Journal of Medicinal Plants*: 2(2):93-112. <https://doi.org/10.9734/EJMP/2012/1040>.
- Abotaleb M, Samuel SM, Varghese E, Varghese S, Kubatka P, Liskova A, Büsselberg D. 2018. Flavonoids in Cancer and Apoptosis. *Cancers (Basel)*. 28;11(1):28. doi: 10.3390/cancers11010028. PMID: 30597838; PMCID: PMC6357032.
- Abubakar AR, Haque M. 2020. Preparation of Medicinal Plants: Basic Extraction and Fractionation Procedures for Experimental Purposes. *J Pharm Bioallied Sci*. 12(1):1-10. doi:10.4103/jpbs.JPBS_175_19.
- Aini, F., Maritsa, H., & Riany, H. 2020. The Potention of Nipah Fiber (*Nypa fruticans* Wurmb.) in The Production of Nata Fruticans Using Soybean Sprouts as a Source of Nitrogen. *Jurnal Biota*. 6(2): 45-50. <https://doi.org/10.19109/10.19109/Biota.v6i2.5952>.
- Altemimi A, Lakhssassi N, Baharlouei A, Watson DG, Lightfoot DA. 2017. Phytochemicals: Extraction, Isolation, and Identification of Bioactive Compounds from Plant Extracts. *Plants*. 6(4):42. <https://doi.org/10.3390/plants6040042>.
- Anwar, Anita Debora. 2013. Prinsip dasar kemoterapi, Bandung Controversies and Consensus In Obstetrics & Gynecology. CV Sagung Set: Bandung. ISBN: 978-602-8674-95-9.
- Ariani, S. 2015. Stop Kanker. Penerbit Istana Media: Yogyakarta.
- Awad, A.; Chinnam, M.; Fink, C.; Bradford, P. 2007. B-sitosterol activates signaling in human breast cancer cells. *Phytomedicine*. 14, 747–754.
- Aziz A, Jack R. 2015. Total Phenolic Content and Antioxidant Activity In *Nypa fruticans* Extract. *Journal of Sustainability Science and Management*. 10(1): 87-91. ISSN: 1823- 8556.
- Batool M., Kauser S., Nadeem HR., Perveen R., Irfan S. 2020. A Critical Review on Alpha Tocopherol. *Sources, RDA and Health Benefits*. Vol. 12: 19- 42.

- Batra P, Sharma AK. 2013. Anti-cancer potential of flavonoids: recent trends and future perspectives. *Biotech.* 3(6):439-459. doi: 10.1007/s13205-013-0117-5. PMID: 28324424; PMCID: PMC3824783.
- Benov, L. 2019. Effect of growth media on the MTT colorimetric assay in bacteria. *PLoS One.* 14(8):e0219713. doi:10.1371/journal.pone.0219713. PMID: 31454355; PMCID: PMC6711527.
- Bhatt, Jethva and Zaveri. 2016. In-Vitro Anti-Tuberculosis Activity of Selected Ethnomedicinal Plants. *International Journal of Herbal Medicine* 4 (4):126-128.
- Bin Sayeed, M.S.; Ameen, S.S. 2015. Beta-sitosterol: A promising but orphan nutraceutical to fight against cancer. *Nutr. Cancer.* 67:1–7.
- Burhan, *et al.* 2019. Efek antioksidan dan antikanker ekstrak batang murbei (*Morus alba* L.) secara in vitro. *Kartika: Jurnal Ilmiah Farmasi.* 7(1):17-21. DOI: 10.26874/kjif.v7i1.173.
- Campbell, N.A., J.B. Reece, dan L.G. Mitchell. 2017. *Biology Eleventh Edition.* Pearson Education Inc: California.
- Carolina C., Salvadori M., GomesMota V., Costa LM. Antinociceptive and antioxidant Activities of Phytol In Vivo and In Vitro Models. *Hindawi Publishing Corporation Neuroscience Journal.* Volume 2013, Article ID 949452, 9 pages <http://dx.doi.org/10.1155/2013/949452>.
- CCRC (Cancer Chemoprevention Research Center). 2013. *Protokol Uji Sitotoksik dengan Metode MTT.* CCRC: Yogyakarta.
- Dai, X., Cheng, H., Bai, X., Li, J. 2017. Breast Cancer Cell Line and Its Relevance with Breast Tumor Subtyping. *Journal of Cancer.* 8(16): 3131-3141. Doi: 10.7150/jca.18457.
- Depkes RI. 1995. *Materia Medika Indonesia Jilid VI.* Direktorat Jendral Pengawasan Obat dan Makanan: Jakarta.
- Ebana *et al.*, 2015; Ebana RUB, Etok CA, Edet UO. 2015. Phytochemical Screening and Antimicrobial Activity of *Nypa fruticans* Harvested from Oporo River in the Niger Delta Region of Nigeria. *International Journal of Innovation and Applied Studies.* 10(4):1120-1124. ISSN 2028- 9324.

- Edu EAB, Edwin WNL, Udensi OU. 2015. Evaluation of Bioactive Compounds in Mangroves: A Panacea towards Exploiting and Optimizing Mangrove Resources. *Journal of Natural Sciences Research*. 5(23):1-10. ISSN 2224-3186 (Paper) ISSN 2225-0921 (Online).
- Fitryesta, Reza. 2016. Pengaruh Penyuluhan Pemeriksaan Payudara Sendiri (Sadari) dengan Penggunaan Media Video Terhadap Pengetahuan dan Sikap Deteksi Dini Kanker Payudara pada Siswi SMA Negeri 1 Sumbawa. [Skripsi]. Program Studi Pendidikan Bidan Universitas Airlangga: Surabaya.
- Gavas Shreelaxmi, G., Sameer, Q., & Karpiński, T.M. 2021. Nanoparticles for cancer therapy: Current progress and challenges. *Nanoscale Research Letters*. 16(1). doi:<https://doi.org/10.1186/s11671-021-03628-6>.
- Gazali M, Nufus H, Nurjanah, Zuriat. 2019. Eksplorasi potensi senyawa bioaktif ekstrak daun nipah (*Nypa fruticans* Wurmb) asal pesisir Aceh Barat sebagai Antioksidan. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 22(1):155-163. doi: 10.17844/jphpi.v22i1.25892.
- Gliszczynska A., Dancewicz K., Gabrys B., Świtalska M. 2021. Synthesis of novel phytoderived γ -butyrolactones and evaluation of their biological activity. *Scientific Reports*. 228 11:4262. <https://doi.org/10.1038/s41598-021-83736-6>.
- Globocan. 2018. Latest Global Cancer Data: Cancer Burden Rises to 18.1 Million New Cases and 9.6 Million Cancer Deaths In 2018. Diunduh pada tanggal 13 September 2020 dari <https://www.who.int/cancer/PRGlobocanFinal.pdf?ua=1>.
- Goyal, Megh R., Joy, P.P., Suleria, H. 2020. Plant Secondary Metabolites for Human Health, Extraxtion of Bioactive Compounds. Apple Academic Press Inc: Florida.
- Habibi RA. 2017. Uji aktivitas antibakteri ekstrak kasar daun Nipah (*Nypa fruticans*) terhadap bakteri *Listeria monocytogenes* dan *Vibrio parahaemolyticus* secara in vitro. [Skripsi]. Universitas Brawijaya: Malang.
- Habli Z, Toumieh G, Fatfat M, Rahal ON, Gali-Muhtasib H. 2017. Emerging Cytotoxic Alkaloids in the Battle against Cancer: Overview of Molecular Mechanisms. *Molecules*. 8;22(2):250. doi: 10.3390/molecules22020250. PMID: 28208712; PMCID: PMC6155614.

- Harborne, J. B. 1996. (Terjemahan: Kosasih Padmawinata dan Iwang Sudiro). *Phytochemical Methods Edisi ke-2: Penuntun Cara Modern Menganalisis Tumbuhan*. Penerbit ITB: Bandung.
- Hardjono, Suko. 2016. Prediksi Sifat Farmakokinetik, Toksisitas dan Aktivitas Sitotoksik Turunan N-Benzoil- N'-(4-fluorofenil) tiourea sebagai Calon Obat Antikanker Melalui Pemodelan Molekul. *Jurnal Ilmu Kefarmasian Indonesia*. Volume 14, Nomor 2.
- Heffner, Linda J & Schrust DJ. 2010. *At a glance sistem reproduksi. Edisi Kedua*. Erlangga Medical Series: Jakarta.
- Hendrawati, A. R. E. 2009. Uji Toksisitas Akut Ekstrak Etanol Daun Kemangi (*Ocimum sanctum* Linn.) terhadap Larva *Artemia salina* Leach dengan Metode *Brime Shrimp Lethality Test* (BST). *Laporan Akhir Karya Tulis Ilmiah*. Fakultas Kedokteran Universitas Diponegoro: Semarang.
- Hossain, Md. Farid, Md. Anwarul Islam. Utilization of Mangrove Forest Plant: Nipa Palm (*Nypa fruticans* Wurmb.). *American Journal of Agriculture and Forestry*. Vol. 3, No. 4:156-160. doi: 10.11648/j.ajaf.20150304.16.
- Isoldi, Mc., Visconti, MA., Castrucci, AL. 2005. Anti-Cancer Drugs: Molecular Mechanism of Action. *Medicinal Chemistry*. 5:685-695.
- Istiqomah, MA, et al. 2020. Anticancer Effects of Polyisoprenoid from *Nypa fruticans* Leaves by Controlling Expression of p53, EGFR, PI3K, AKT1, and Mtor Genes in Colon Cancer (WiDr) Cells. *Natural Product Communication*. 15(4):1-8. DOI: 10.1177/1934578X20918412.
- Jain, et.al. 2016. Medicinal Plants for Treatment of Cancer: A Brief Review. *Pharmacognosy Journal*. Vol 8, Issue 2. DOI: 10.5530/pj.2016.2.1
- Jayaprakasha, G., Mandadi, K., Poulouse, S.M., Jadegoud, Y., Gowda, G.N., Patil, B.S. 2007. Inhibition of colon cancer cell growth and antioxidant activity of bioactive compounds from *Poncirus trifoliata* (L.) Raf. *Bioorg. Med. Chem*. 15:4923– 4932.
- Jiang, Qing. 2014. Natural forms of vitamin E: metabolism, antioxidant and antiinflammatory activities and the role in disease prevention and therapy. *Free Radic Biol Med*. 72: 76–90. doi:10.1016/j.freeradbiomed.2014.03.035.

- Jones WP & Kinghorn AD. 2006. Extraction of plant secondary metabolites. in: Sarker SD, Latif Z, Gray AI, eds. *Natural Products Isolation. 2nd Ed.* Humana Press: New Jersey.
- Karakaş D, Ari F, Ulukaya E. 2017. The MTT viability assay yields strikingly false-positive viabilities although the cells are killed by some plant extracts. *Turk J Biol.* 41(6):919-925. doi: 10.3906/biy-1703-104. PMID: 30814856; PMCID: PMC6353273.
- Kemenkes RI. 2019. Riset Kesehatan Dasar. Badan Penelitian dan Pengembangan Kesehatan: Jakarta.
- Kholish, M. 2010. *Panduan Lengkap Agribisnis Patin.* Penebar Swadaya: Jakarta.
- KPKN. 2017. *Komite Penanggulangan Kanker Nasional: Panduan Penatalaksanaan Kanker Payudara.* Kementerian Kesehatan Republik Indonesia. Diunduh 13 September 2020 dari <http://kanker.kemkes.go.id/guidelines/PPK Payudara.pdf>.
- Latifah. 2014. Potensi Citrulline Sebagai Agen Kemoterapi Doxorubicin Pada Sel Kanker Payudara MCF-7: Studi In Vitro dan In Silico. [Skripsi]. Universitas Muhammadiyah Purwokerto: Purwokerto.
- Lestari Y, Ardiningsih P, Nurlina. 2016. Aktivitas antibakteri gram positif dan negatif dari ekstrak dan fraksi daun Nipah (*Nypa fruticans* wurmb.) asal pesisir sungai kakap Kalimantan Barat. *Jurnal Kimia Khatulistiwa.* 5(4):1-8. ISSN 2303-1077.
- Lestari, Dewi Y. 2012. Kajian Modifikasi dan Karakterisasi Zeolit Alam dari Berbagai Negara. *Jurnal Prosiding Seminar Nasional Kimia dan Pendidikan Kimia.*
- Lovly MS, Merlee TMV. 2017. In vitro bioactivity and phytochemical characterization *Nypa fruticans* of Wurmb: a mangrove from Kerala. *Int. Res. J. Biological Sci.* 6(6): 42-52. ISSN 2278-3202.
- Luis C, Castaño-Guerrero Y, Soares R, Sales G, Fernandes R. 2019. Avoiding the Interference of Doxorubicin with MTT Measurements on the MCF-7 Breast Cancer Cell Line. *Methods Protoc.* 2(2):29. doi:10.3390/mps2020029. PMID: 31164609; PMCID: PMC6632110.
- Magdalena, M.M. 2014. *Penyebab Kanker yang Harus Diwaspadai.* Diunduh pada tanggal 23 September 2020 dari <http://www.deherba.com/penyebabkanker-yangarusdiwaspadai.html>.

- Maningkas, PF., Pandiangan D., Kandou, FE. 2019. Uji Antikanker dan Antioksidan Ekstrak Metanol Daun Pasote (*Dysphania ambrosioides* L.) Anticancer and Antioxidant Test of Pasote (*Dysphania ambrosioides* L.) Leaves Methanol Extract. *Jurnal Bioslogos* Agustus 2019, Vol. 9.
- Meiliana, et al. 2021. Cancer Genetics and Epigenetics in Cancer Risk Assesment. *Mol Cell Biomed Sci.* 5(2): 41-61. DOI: 10.21705/mcbs.v5i2.198.
- Noblick, Larry., Lima, Joanna., Valdes, Imena. 2018. *Nypa fruticans* in the Western Atlantic: Potential for Recolonization. *PALMS*. Vol. 62(4).
- Patterson AD, Gonzalez FJ, Perdew GH, Peters JM. 2018. Molecular Regulation of Carcinogenesis: Friend and Foe. *Toxicol Sci.* 1;165(2):277-283. doi: 10.1093/toxsci/kfy185. PMID: 30053205; PMCID: PMC6154271.
- PCC (Parkway Cancer Centre). 2013. *What is Colorectal Cancer?* Diunduh pada tanggal 23 September 2020 dari <https://www.parkwaycancercentre.com/learn-about-cancer/types-of-cancer/colorectal-cancer/>.
- Peters JM, Gonzalez FJ. 2018. The Evolution of Carcinogenesis. *Toxicol Sci.* 1;165(2): 272-276. doi: 10.1093/toxsci/kfy184. PMID: 30629266; PMCID: PMC6154269.
- Price,2006 Price, A. Sylvia, Lorraine Mc. Carty Wilson. 2006. *Patofisiologi: Konsep Klinis Proses-proses Penyakit, Edisi 6, (terjemahan)*. Peter Anugrah, EGC: Jakarta.
- Rahayu, Slamet., Sunarto. 2020. Tumbuhan Mangrove Bermanfaat Obat di Desa Gedangan, Kecamatan Purwodadi, Kabupaten Purworejo, Jawa Tengah. *Jurnal Jamu Indonesia.* 5(2): 76-84. DOI: <https://doi.org/10.29244/jjji.v5i2.116>.
- Rahmatullah M, Sadeak SkMdl, Bachar SC, Hossain MdT, Al-Mamun A, Montaha, Jahan N, Chowdhury MH, Jahan R, Nasrin N, Rahman M, and Rahman S. 2010. Brine Shrimp Toxicity Study of Different Bangladeshi Medicinal Plants. *Advances in Natural and Applied Sciences.* 4 (2): 163-173.
- Rajabi, et al. 2015. *Artemia salina* as a model organism in toxicity assessment of nanoparticles. *NCBI Daru.* 23(1):20.

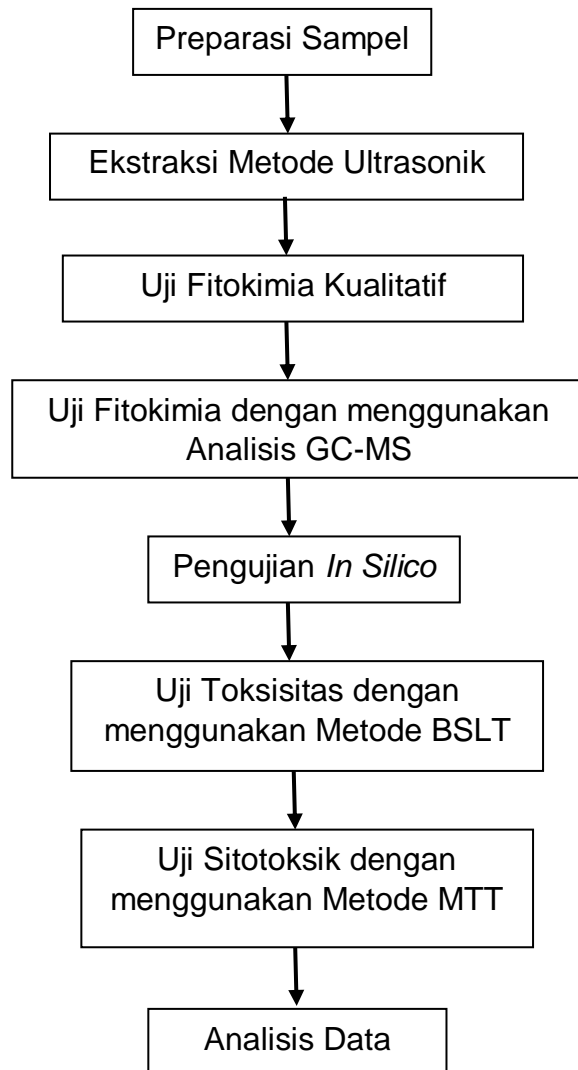
- Risky, TA., dan Suyatno. 2014. Aktivitas Antioksidan dan Antikanker Ekstrak Metanol Tumbuhan Paku *Adiantum philippensis* L. *J UNESA Chem* 3 No. 1.
- Rizvi S., Raza T., Ahmed F., Ahmad A., Abbas S., Mahdi F. 2014. The Role of Vitamin E in Human Health and Some Diseases. *Sultan Qaboos University Med J.* Vol. 14, Iss. 2:157-165.
- Salehi B, Quispe C, Sharifi-Rad J, Cruz Martins N, Nigam M, Mishra AP, Konovalov DA, Orobinskaya V, Abu-Reidah IM, Zam W, Sharopov F, Venneri T, Capasso R, KukulaKoch W, Wawruszak A and Koch W. 2021. Phytosterols: From Preclinical Evidence to Potential Clinical Applications. *Front. Pharmacol.* 11:599959. doi: 10.3389/fphar.2020.599959.
- Sammar, *et al.* 2019. Correlation between cytotoxicity in cancer cells and free radical-scavenging activity: *In vitro* evaluation of 57 medicinal and edible plant extracts. *Oncology Letters.* 18: 6563-6571. DOI: 10.3892/ol.2019.11054.
- Sanye, Li., Kuo, H. D., Yin, R., Wu, R., Liu, X., Wang, L., Hudlikar, R., Peter, R. M., & Kong, A. N. 2020. Epigenetics/epigenomics of triterpenoids in cancer prevention and in health. *Biochemical pharmacology.* 175:113890. <https://doi.org/10.1016/j.bcp.2020.113890>.
- Saranraj, P dan Sujitha, D. 2015. Mangrove medicinal plants: a review. *Eurasian J.Toxicol. Sci.* 7:146–156.
- Sari DP, Basyuni M, Hasibuan PAZ, Sumardi S, Nuryawan A, Wati R. 2018. Cytotoxic and antiproliferative activity of polyisoprenoids in seventeen mangroves species against WiDr colon cancer cells. *Asian Pac J Cancer Prev.* (12):3393-3400. doi:10.31557/APJCP.2018.19.12.3393.
- Shahdaat M., Karim SM., Sharmin T., Morshed MM. 2016. Critical Analysis on Characterization, Systemic Effect, and Therapeutic Potential of Beta-Sitosterol: A Plant-Derived Orphan Phytosterol. *Medicines.* 3:29. doi: 10.3390/medicines3040029.
- Siddiqui *et al.*, 2022. Review Article Plants in Anticancer Drug Discovery: From Molecular Mechanism to Chemoprevention. *Hindawi BioMed Research International.* Volume 2022, Article ID 5425485, 18 pages. <https://doi.org/10.1155/2022/5425485>.
- Siregar, Saipul Bahri. 2012. Analisis Finansial Serta Prospek Pengolahan Buah Nipah (*Nypa Fruticans*) Menjadi Berbagai Produk

Olahan.[Skripsi]. Fakultas Pertanian Universitas Sumatera Utara: Medan.

- Siswandono, Widiandani, T., dan Hardjono, S. 2016. Docking and Cytotoxicity Teston Human Breast Cancer Cell Line (T47D) of N-(Allylcarmothioyl)-3-chlorobenzamide and D-(Allylcarmothioyl)-3,4-dichlorobenzamide. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*. Volume 8, Nomor 2.
- Siswandono. 2016. *Kimia Medisinal 1: Edisi kedua*. Airlangga Press: Jakarta.
- Soemirat, J. 2005. *Toksikologi Lingkungan*. Gadjah Mada University Press: Yogyakarta.
- Song YW, Somi KC. 2015. Phytol induces apoptosis and ROS-mediated protective autophagy in human gastric adenocarcinoma AGS cells. *Biochem Anal Biochem*. DOI: 10.4172/2161-1009.1000211.
- Stopeck, A.T. 2015. *Breast Cancer*. Diunduh pada tanggal 23 September 2020 dari <http://emedicine.medscape.com/article/1947145-overview#a5>.
- Subiandono, E., N. M. Heriyanto, dan Endang Karlina. 2011. Potensi Nipah (*Nypa fruticans* Wurmb.) sebagai Sumber Pangan dari Hutan Mangrove. *Buletin Plasma Nutfah*. 17(1).
- Sulfahri, Rih W, Makatita, Iskandar. 2019. Utilization of Nypa fruit in Alzheimer's disease: An in silico approach. *Journal of Physics: Conference Series* 1341-022003.
- Syahputra, G. 2014. Peran Bioinformatika Dalam Desain Kandidat Molekul Obat. *Biotrends*. 1(1).
- Syed A, Muhammad H, Muhammad U, Rana M, Shahid M, Khalid A, Muhammad B, Muhammad Z. 2019. A molecular docking approach to evaluate the pharmacological properties of natural and synthetic treatment candidates for use against hypertension *International Journal of Environmental Research and Public Health*. 16:923.
- Theerawitaya, C.; Samphumphaung, T.; Cha-um, S.; Nana Yamada, N. and Takabe, T. 2014. Responses of Nipa palm (*Nypa fruticans*) seedlings, a mangrove species, to salt stress in pot culture. *Flora Morphology, Distribution and Functional Ecology of Plants*. 209 (10):597-603.

- Ubulom PME, Umoh GS, Asuquo EM, Umohata IA. 2019. Evaluation of the potency of ethanol extracts of *Nypa fruticans* against *Culex quinquefasciatus* and *Aedes aegypti* larvae: An exploratory study. *Journal of Wetlands and Waste Management*. 3(2):85-91.
- Umar, MZ., Faslih, A., Arsyad M., Al-Ikhsan, A., Umar, M. 2017. The use of Nipah Leaves (*Nypa fruticans*) as an environmentally friendly roofing materials. *AIP Conference Proceedings*. DOI: <http://doi.org/10.1063/1.5003484>.
- Usman. 2017. Uji fitokimia dan uji antibakteri dari akar mangrove *Rhizophora Apiculata* terhadap bakteri *Escherichia coli* dan *Staphylococcus aureus*. *Jurnal Kimia dan Pendidikan Kimia* Vol.2(3): 169–177.
- Valenzuela, Luisa & Torres Moreno, Heriberto & Velazquez, Carlos & Garibay-Escobar, Adriana & Robles-Zepeda, Ramón. 2016. Triterpenoids: Synthesis, Uses in Cancer Treatment and other Biological Activities. Department of Biology Sciences, Universitas Sonora: Mexico.
- WHO. 2018. Organization WHO: Breast Cancer. Diunduh pada tanggal 13 September 2020 dari [https:// www. who.int/ cancer/ prevention/ diagnosis-screening/ breastcancer/en/](https://www.who.int/cancer/prevention/diagnosis-screening/breastcancer/en/).
- Wibowo, Singgih. 2013. *Artemia untuk Pakan Ikan dan Udang*. Penebar Swadaya: Jakarta.
- Williams, G.H dan Stoeber, K. 2012. The Cell Cycle and Cancer. *Journal of Pathology*. Volume 226: 352–364.
- Wing-Yan Li, Shun-Wan Chan, De-Jian Guo & Peter Hoi-Fu Yu. 2007. Correlation Between Antioxidative Power and Anticancer Activity in Herbs from Traditional Chinese Medicine Formulae with Anticancer Therapeutic Effect. *Pharmaceutical Biology*. 45:7, 541-546, DOI: 10.1080/13880200701498879.
- Y. Feng, *et al.*, 2018. Breast cancer development and progression: Risk factors, cancer stem cells, signaling pathways, genomics, and molecular pathogenesis. *Genes & Diseases*. 5:77-106. <https://doi.org/10.1016/j.gendis.2018.05.001>.
- Yarsa et al. 2019. Pedoman Keterampilan Klinis *Pemeriksaan Payudara*. Fakultas Kedokteran Universitas Sebelas Maret: Surakarta.
- Yulianto, Amaloyah, Nurul. 2017. *Bahan Ajar Toksikologi Lingkungan*. Kemenkes RI: Jakarta.

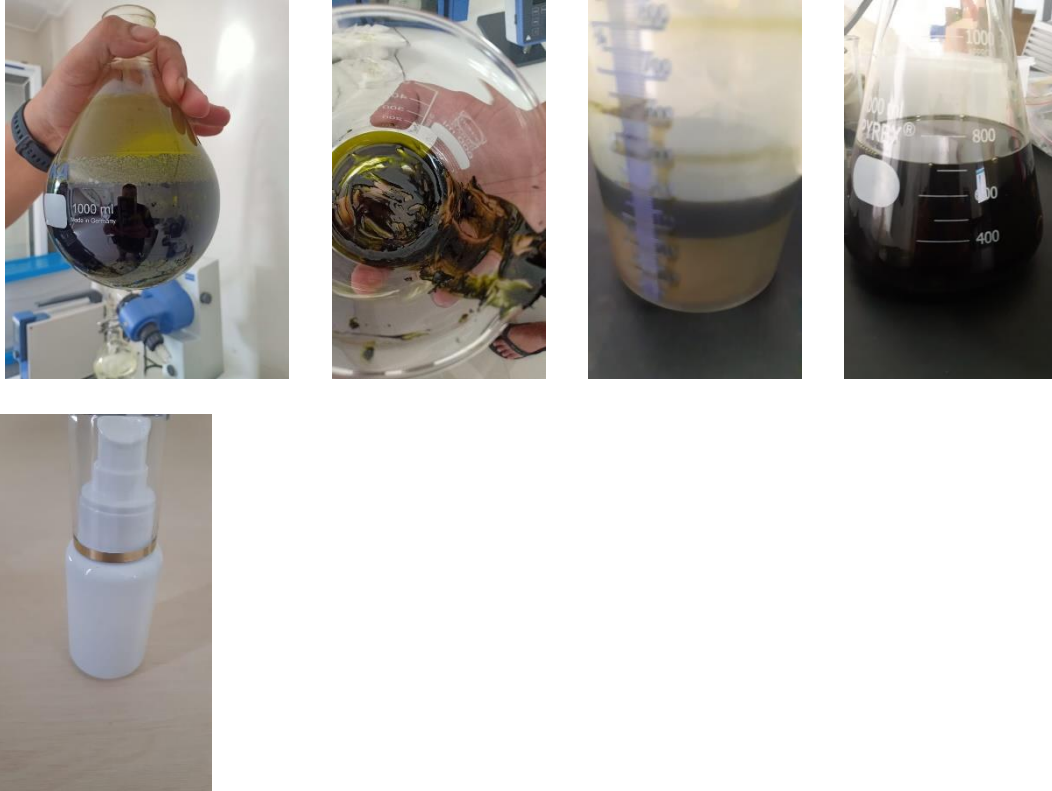
Lampiran 1. Skema Alur Penelitian



Lampiran 2. Preparasi Sampel



Lampiran 3. Ekstraksi Metode Ultrasonik



Lampiran 4. Uji Fitokimia Kualitatif





Lampiran 5. Uji Fitokimia dengan Metode GC-MS

No.	Ret. Time min	Peak Name	CAS Number	Est. Amt. n.a.	SI	RSI	Prob. %	Library	ISTD	Rel.Area %
1	0.881	Dimethyl sulfone	67-71-0	n.a.	876	985	27.69	nist_msms		2.46
2	1.959	2,2-Dimethoxybutane	3453-99-4	n.a.	673	778	31.50	mainlib		0.46
3	4.047	Decane	124-18-5	n.a.	817	934	34.63	mainlib		0.72
4	4.139	2-Myristinoyl pantetheine	0	n.a.	650	650	12.48	mainlib		0.04
5	4.194	Glycerin	56-81-5	n.a.	703	872	54.87	replib		0.90
6	4.204	Glycerin	56-81-5	n.a.	745	877	51.20	replib		0.60
7	4.248	Glycerin	56-81-5	n.a.	844	914	72.80	replib		1.59
8	4.353	Glycerin	56-81-5	n.a.	845	884	59.87	replib		6.24
9	5.088	Dimethylsilyloxycyclohexane	0	n.a.	639	650	25.27	mainlib		0.57
10	5.132	4H-Pyran-4-one, 2,3-dihydro-3,5-dihydroxy-6-methyl-	28564-83-2	n.a.	865	944	90.84	mainlib		0.93
11	5.248	d-Glycero-d-Ido-heptose	0	n.a.	639	646	14.61	mainlib		0.45

12	5.459	Desulphosinigrin	5115-81-1	n.a.	687	695	13.48	mainlib	0.10
13	5.503	Catechol	120-80-9	n.a.	859	889	71.77	replib	1.21
14	5.901	1-Deoxy-d-mannitol	60965-81-3	n.a.	673	697	17.57	mainlib	0.47
15	6.000	Desulphosinigrin	5115-81-1	n.a.	711	716	14.17	mainlib	1.31
16	6.210	2-Methoxy-4-vinylphenol	7786-61-0	n.a.	715	781	11.95	mainlib	0.98
17	7.098	2-Myristinoyl pantetheine	0	n.a.	707	709	15.12	mainlib	0.69
18	7.367	Desulphosinigrin	5115-81-1	n.a.	734	764	35.15	mainlib	0.01
19	7.418	D-Allose	2595-97-3	n.a.	783	864	28.79	mainlib	1.31
20	7.802	Dodecanolic acid	143-07-7	n.a.	853	904	72.22	replib	0.82
21	7.911	3-tert-Butyl-4-hydroxyanisole	121-00-6	n.a.	721	778	17.01	replib	0.59
22	8.129	1,3,5-Benzenetriol	108-73-6	n.a.	749	815	61.51	replib	0.68
23	8.527	α-D-Glucopyranoside, O-α-D-glucopyranosyl-(1,7)dan.3)-β-D-fructofuranosyl	597-12-6	n.a.	698	733	28.63	mainlib	0.77
24	9.176	Tetradecanolic acid	544-63-8	n.a.	871	891	70.64	replib	0.62
25	9.217	Cyclopropanetetradecanolic acid, 2-octyl-, methyl ester	52355-42-7	n.a.	727	751	28.89	mainlib	0.53
26	9.509	5,5,8a-Trimethyl-3,5,6,7,8,8a-hexahydro-2H-chromene	54344-82-0	n.a.	706	747	24.54	mainlib	0.52
27	9.612	2-Hydroxy-5-methylisophthalaldehyde	7310-95-4	n.a.	731	787	44.70	mainlib	1.40

28	9.724	3,7,11,15-Tetramethyl-2-hexadecen-1-ol	102608-53-7	n.a.	861	938	37.15	mainlib	2.49
29	9.887	3,7,11,15-Tetramethyl-2-hexadecen-1-ol	102608-53-7	n.a.	816	944	26.87	mainlib	0.48
30	9.938	9-Octadecenoic acid, (2-phenyl-1,3-dioxolan-4-yl)methyl ester, cis-	56599-45-2	n.a.	675	678	8.22	mainlib	0.12
31	9.972	9-Octadecenoic acid, (2-phenyl-1,3-dioxolan-4-yl)methyl ester, cis-	56599-45-2	n.a.	676	677	15.16	mainlib	0.04
32	10.016	3,7,11,15-Tetramethyl-2-hexadecen-1-ol	102608-53-7	n.a.	773	918	25.46	mainlib	1.71
33	10.516	n-Hexadecanolic acid	57-10-3	n.a.	927	935	81.29	replib	4.06
34	10.921	Dasycarpidan-1-methanol, acetate (ester)	55724-48-6	n.a.	767	787	32.08	mainlib	0.03
35	11.013	Oleic Acid	112-80-1	n.a.	713	785	12.84	replib	0.49
36	11.554	Phytol	150-86-7	n.a.	931	945	75.29	replib	8.54
37	11.686	9,12-Octadecadienoic acid (Z,Z)-	60-33-3	n.a.	855	904	17.81	replib	0.57
38	11.737	9,12,15-Octadecatrienoic acid, (Z,Z,Z)-	463-40-1	n.a.	899	922	45.25	replib	6.81
39	11.856	Octadecanolic acid	57-11-4	n.a.	897	904	75.04	mainlib	2.72
40	14.295	Hexadecanolic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	23470-00-0	n.a.	810	916	39.78	mainlib	1.04
41	15.567	9-Octadecenoic acid (Z)-, 2-hydroxy-1-(hydroxymethyl)ethyl ester	3443-84-3	n.a.	754	803	18.35	mainlib	0.59
42	15.621	9,12,15-Octadecatrienoic acid, 2,3-dihydroxypropyl ester, (Z,Z,Z)-	18465-99-1	n.a.	775	827	29.66	mainlib	0.63
43	16.485	Squalene	111-02-4	n.a.	766	855	16.62	replib	1.29
44	16.900	9,12,15-Octadecatrienoic acid, 2,3-bis(trimethylsilyloxy)propyl ester, (Z,Z,Z)-	55521-22-7	n.a.	683	730	36.89	mainlib	0.64

45	18.699	(+)- α -Tocopherol	59-02-9	n.a.	732	848	57.51	nlist_msms		7.01
46	19.485	1-Monolinoleoylglycerol trimethylsilyl ether	54284-45-6	n.a.	664	717	57.78	mainlib		0.45
47	19.686	1-Monolinoleoylglycerol trimethylsilyl ether	54284-45-6	n.a.	662	734	30.30	mainlib		0.67
48	19.988	1-Monolinoleoylglycerol trimethylsilyl ether	54284-45-6	n.a.	674	740	21.74	mainlib		1.55
49	20.604	7-Sitosterol	83-47-6	n.a.	861	869	67.90	mainlib		12.11
50	21.859	1-Monolinoleoylglycerol trimethylsilyl ether	54284-45-6	n.a.	651	682	29.94	mainlib		0.93
51	22.274	Cholest-5-en-3-one	601-54-7	n.a.	708	715	10.74	replib		4.41
52	22.573	Betulin	473-98-3	n.a.	711	715	18.74	replib		2.48
53	23.189	Hexadecanoic acid, 1-(hydroxymethyl)-1,2-ethanedyl ester	761-35-3	n.a.	722	727	39.23	mainlib		7.02
54	23.355	Hexadecanoic acid, 1-(hydroxymethyl)-1,2-ethanedyl ester	761-35-3	n.a.	691	698	34.12	mainlib		4.15

100

Lampiran 6. Uji Toksisitas dengan Menggunakan Metode BSLT

NAMA : Evy Noviana

Tabel 1. Data hasil pengamatan kematian larva udang air asin (*Artemia salina* Leach.) setelah 24 jam perlakuan

Kode Sampel	Jumlah larva mati tiap konsentrasi			Persentase kematian larva udang (%)			% kematian larva udang - % kematian kontrol		
	1 ppm	10 ppm	100 ppm	1 ppm	10 ppm	100 ppm	1 ppm	10 ppm	100 ppm
Ekstrak Et-OAC	0	3	5						
	2	3	6						
	2	5	6						
Total Kematian	4	11	17	13,33	36,67	56,67	13,33	33,33	50,00
Kontrol	0	0	0						
	0	0	1						
	0	1	1						
Total Kematian	0	1	2	0,00	3,33	6,67			

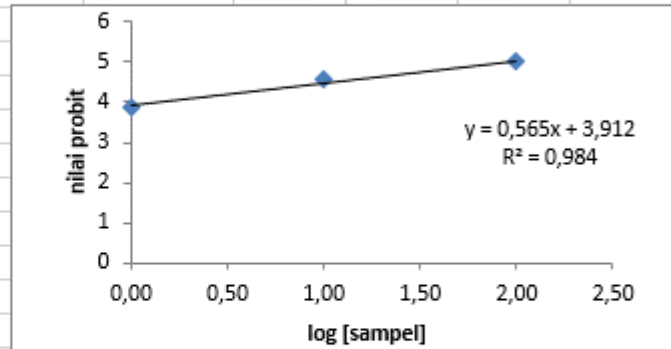
REKAMAN ANALISIS LC 50

Kurva Regresi log [sampel] VS nilai probit

NAMA : Evy Noviana

Kode Sampel:

log[sampel]	nilai probit
0,00	3,87
1,00	4,56
2,00	5,00



Untuk LC 50 (x), nilai probit adalah 5 (y), dimasukkan

ke persamaan regresi $y = 0,565x + 3,912$

$$y - 3,912/0,565 = x$$

$$5 - 3,912/0,565 = 1,9256$$

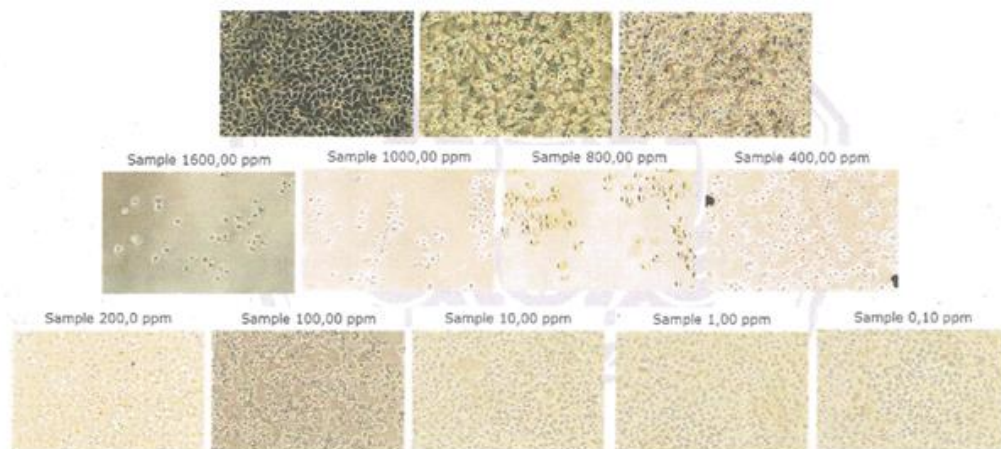
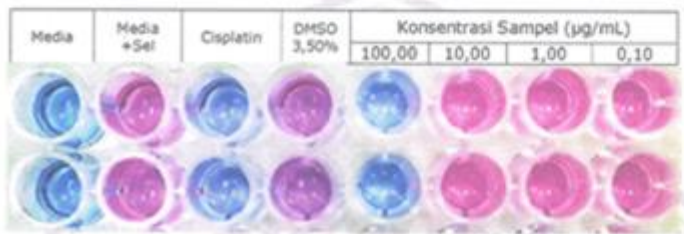
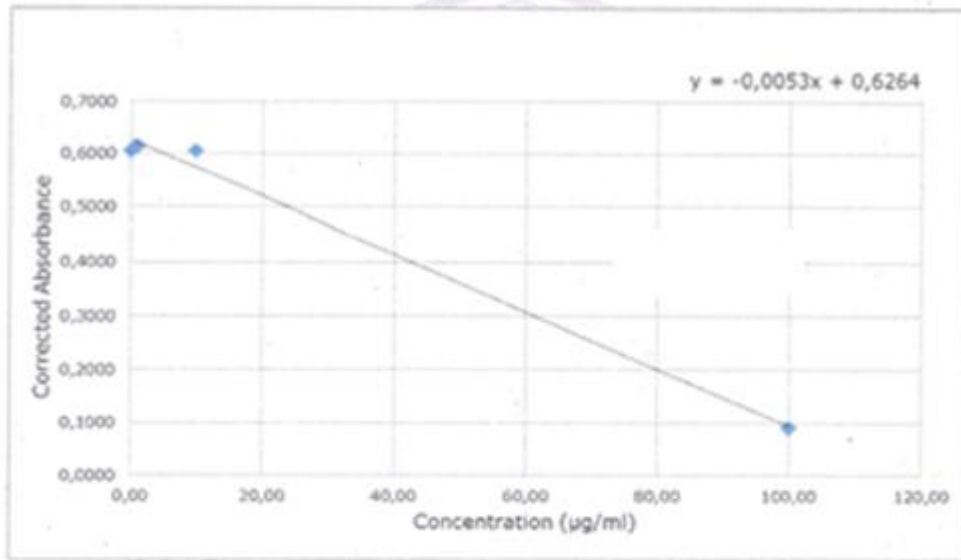
$$\text{Jadi log } x = 1,9256$$

$$x = \text{antilog } 1,9256$$

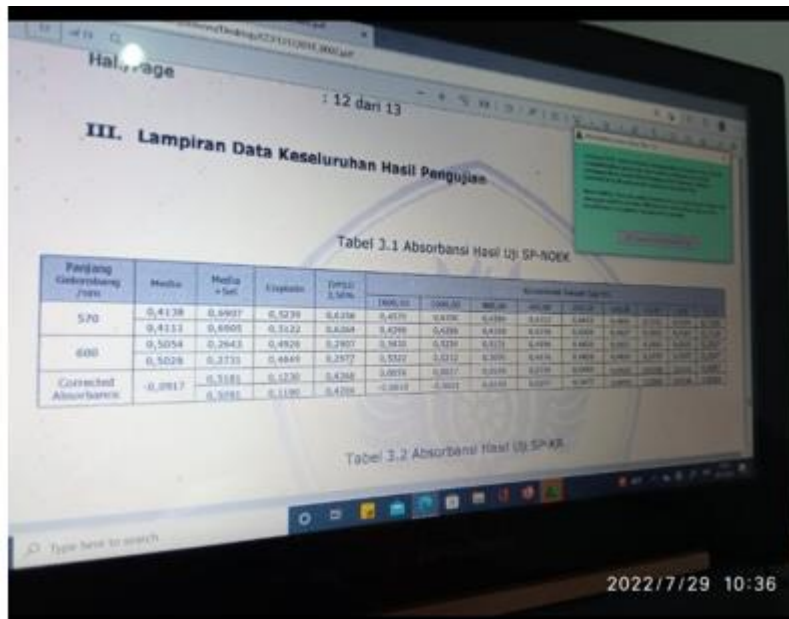
$$x = 84,2558 \text{ ppm}$$

$$\text{LC 50 sampel} = 84,2558 \text{ ppm}$$

Lampiran 7. Uji Sitotoksik dengan Menggunakan Metode MTT



Gambar 2. Dokumen sel hasil uji EV (1600 ppm-0.10 ppm)



Persentase sel hidup dihitung menggunakan rumus:

$$\% \text{ viabilitas sel} = \frac{(\text{absorbansi perlakuan} - \text{absorbansi kontrol media})}{\text{absorbansi kontrol negatif} - \text{absorbansi kontrol media}} \times 100\%$$

Absorbansi media

Absorbansi kontrol (Abs k) = 0,583