

## DAFTAR PUSTAKA

- Adawiyah, Lu'lu'il., Maruni Wiwin Diarti, Erlin Yustin Tatontos. 2019. Lama Waktu Inkubasi terhadap Morfologi Bakteri *Neisseria gonorrhoeae*. *Jurnal Kesehatan Poltekkes Kemenkes Ri Pangkalpinang*, 7 (2): 36-41.
- Adzkie Muhammad, Nunuk Aries Nurulita, Arif Budiman. 2017. Uji Sensitivitas Antibiotik Terhadap Bakteri penyebab Infeksi Saluran Kemih pada Pasien Rawat Inap Di RSUD Prof. Dr Margono Soekarjo Purwokerto. *Pharmacy Journal*, 14 (2): 247-263.
- Al-Araji, L., Rahman, R. N., Basri, M. and Salleh, A. B. 2007. Microbial Surfactant. *Journal. Molecular Biol and Biotechn.* 15(3): 99-105.
- Ali, Nawazish; Fenghuan Wang; Baocai Xu; Bushra Safdar; Asad Ullah; Muhammad Naveed; Ce Wang; and Muhammad Tayyab Rashid. 2019. Production and Application of Biosurfactant Produced by *Bacillus licheniformis* Ali5 in Enhanced Oil Recovery and Motor Oil Removal from Contaminated Sand. *Molecules*, 24: 4448.
- Al-Sulaimani, H; Al-Wahaibi, Y; Al-Bahry, S; Elshafle, A; Al-Bemani, A; Joshi, S; Zargari, S. 2011. Optimization and partial characterization of biosurfactants produced by *bacillus* species and their potential for ex-situ enhanced oil recovery. *SPE Journal*. 166: 72–682.
- Alvionita, Mieke dan Hertadi, Rukman. 2021. Pengaruh Jenis Sumber Nitrogen Pada Produksi Biosurfaktan Oleh Bakteri Halofil. *Indonesian Journal of Chemical Analysis*, 04 (01): 11-17.
- Alyousif., Nassir Abdullah., Wijdan H. Al-Tamimi., Yasin Y. Y. Al-Luaibi. 2020. Screening, enhance production and characterization of biosurfactant produced by *Pseudomonas aeruginosa* isolated from hydrocarbon contaminated soil. *EurAsian Journal of BioSciences*. 14: 4377-4391.
- Anwar, Thohari. 2021. Asam Lemak. Sains Kimia. Diakses pada 16 September 2023. <https://sainskimia.com/beberapa-contoh-lemak-tak-jenuh-ganda-dalam-kehidupan-sehari-hari/asam-lemak/>.
- Arora SK, Sony J, Sharma A, Taneja M. 2015. Production and characterization of biosurfactant from *Pseudomonas* spp. *Int. J. Curr. Microbiol. App. Sci*, 4 (1): 245-253.

- Astuti, Dwi. 2012. Pengaruh Variasi Jumlah Inokulum Konsorsium Bakteri Terhadap Degradasi Hidrokarbon Minyak Bumi. *Skripsi*. Fakultas Matematika dan Ilmu Pengetahuan Alam, Program Studi Biologi, Universitas Indonesia.
- Banat, I. M., Franzeti, A., Bestetti, I., Martinotti, M. G., Fracchia, L., Smyth, T. J., and Marchant, R. 2010. Microbial Biosurfactants Production, Application and Future Potential. *J. Appl Microbiol and Biotechnol*. 87 (2):427-444.
- Bartleby. 2023. Glycolipid in Organic Chemistry. Diakses pada 16 September 2023. <https://www.bartleby.com/subject/science/chemistry/concepts/glycolipid-in-organic-chemistry>.
- Bhardwaj G, Cameotra SS, Chopra HK. 2013. Biosurfactants from fungi: a review. *J Pet Environ Biotechnol*, 4: 1–6.
- Bogaert INAV, Zhang J, Soetaert W. 2011. Microbial synthesis of sophorolipids. *Process. Biochem*, 46 (8): 21–33.
- Bogaert, I.N.A., Soetaert, W. 2011. *Sophorolipids*. In: *Soberón-Chávez, G. (eds) Biosurfactants*. Microbiology Monographs, vol 20. Springer, Berlin, Heidelberg.
- Borsanyiova M., Patil A., Mukherji R., Prabhune A., Bopegamage S. 2016. Biological activity of sophorolipids and their possible use as antiviral agents. *Folia Microbiol (Praha)*, 61: 85-9.
- Bouassida, M., N. Fourati, I. Ghazala, S. Ellouze-Chaabouni, D. Ghribi. 2018. Potential application of *Bacillus subtilis* SPB1 biosurfactants in laundry detergent formulations: Compatibility study with detergent ingredients and washing performance, *Eng. Life Sci*: 18: 70–77.
- Budiarti, R. S. 2000. Optimasi Konsentrasi Crude Oil dan Sumber Nitrogen Pada Produksi Biosurfaktan oleh Bakteri Hidrokarbonoklastik dari 42 Bangko. *Tesis*. Fakultas Teknologi Hayati Institut Teknologi Bandung. Bandung.
- Cappello, S., Yakimov, M.M. 2010. *Alcanivorax*. In: Timmis, K.N. (eds) *Handbook of Hydrocarbon and Lipid Microbiology*. Springer, Berlin, Heidelberg.
- Carolin, Femina C., Kumar, P.S., Joshiba, G.J., Madhesh, P., Ramamurthy, R. 2021. Sustainable strategy for the enhancement of hazardous aromatic amine degradation using lipopeptide biosurfactant isolated from *Brevibacterium casei*. *Journal of Hazardous Materials*, 408: 124943.

- Chaida A, Chebbi A, Bensalah F, Franzetti A. 2021. Isolation and characterization of a novel rhamnolipid producer *Pseudomonas* sp. LGMS7 from a highly contaminated site in Ain El Arbaa region of Ain Temouchent, Algeria. *Biotech Journal*, 11(4): 200.
- Chaprao, M.J, Ferreira I.N.S, Correa P.F., Rufino RD, Luna JM, Silva EJ, et al. Application of bacterial and yeast biosurfactants for enhanced removal and biodegradation of motor oil from contaminated sand. *Electron. J Biotechnology*, 18 (4): 71–9.
- Chebbi A., Elshikh M., Haque F., Ahmed S, Dobbin S., Marchant R. 2017. Rhamnolipids from *Pseudomonas aeruginosa* strain W10; as antibiofilm/antibiofouling products for metal protection. *Journal of Basic Microbiology*. 57: 364–375.
- Chemspider. 2023. Lipoic Acid. Diakses pada 17 September 2023. <http://www.chemspider.com/Chemical-Structure.841.html>.
- Chen, J., Q. Wu, Y. Hua, J. Chen, H. Zhang, H. Wang. 2017. Potensi penerapan rhamnolipid biosurfaktan di bidang pertanian dan biomedis. *Appl Microbiol Biotechnol*, 101: 8309 – 8319.
- Cipinyte, V., Grigiskis, S., Sapokaite, D., Baskys, E., 2011. Production of biosurfactants by *Arthrobacter* sp. N3, a hydrocarbon degrading bacterium. *Environment Technology Resources*, 1: 68 – 75.
- Cochrane, S.A., Vederas, J.C. 2016. Lipopeptides from *Bacillus* and *Paenibacillus* spp: A Gold Mine of Antibiotic Candidates. *Medicinal Research Reviews*, 36 (1): 4-31.
- Darusman, Fitrianti & Wulandari, Inayah & Dewi, Mentari. 2023. Kajian Tingkat Iritasi Surfaktan Berdasarkan Nilai Zein pada Sediaan Body Wash. *Majalah Farmasetika*. 8: 148.
- Das P, Mukherjee S, Sen R. 2008. Antimicrobial potential of a lipopeptide biosurfactant derived from a marine *Bacillus circulans*. *J Appl Microbiol*, 104: 1675-1684.
- De Ro, Nicolas. 2021. Asymmetric Lipid Transfer Between Vesicles Measured by QCM-D.
- De S, Malik S, Ghosh A, Saha R, Saha B 2015. *A review on natural surfactants*. *RSC Adv*, 5 (657): 57–67.

- Dehghan, G., Behravan, dan Moshafi. 2008. *Studies on Biosurfactants Production by Bacillus licheniformis Iran*. Pharmaceutics Research Center: Kerman University of Medical Sciences.
- Drakontis, C.E., Amin, S. Biosurfactants: Formulations, properties, and applications. 2020. *Current Opinion in Colloid and Interface Science*, 48: 77-90.
- Durval, J. B., Beatriz G., Ribeiro, Jaciana S., Aguiar., Raquel D. Rufino., Attilio Converti and Leonie A. Sarubbo. 2021. Application of a Biosurfactant Produced by *Bacillus cereus* UCP 1615 from Waste Frying Oil as an Emulsifier in a Cookie Formulation. *Journal of Fermentation*, 7: 189.
- Efendi, Y; Yusra Y; Efendi V. 2017. Optimasi Potensi Bakteri *Bacillus subtilis* sebagai Sumber Enzim Protease. *Jurnal Akuatika Indonesia*. 2 (1): 87-94.
- El-Sheshtawy, I. Aiad, M.E. Osman, A.A. Abo-ELnasr, A.S. Kobisy. 2015. Production of biosurfactants by *Bacillus licheniformis* and *Candida albicans* for application in microbial enhanced oil recovery. *Egyptian Journal of Petroleum*, 25(3): 293-298.
- Fazli, Rahmad Rizki; Latifah Hanum, Mieke Alvionita, Said Ali Akbar. 2022. Variasi Sumber Karbon Terhadap Produksi Biosurfaktan oleh Bakteri Halofilik Isolat Tambak Garam Kajhu Aceh Besar. *Lantanida Journal*, 10 (1): 1-85.
- Fazli, Rahmad., Latifah Hanum, Mieke Alvionita, Said Akbar. 2022. Variasi Sumber Karbon Terhadap Produksi Biosurfaktan oleh Bakteri Halofilik Isolat Tambak Garam Kajhu Aceh Besar. *Lantanida Journal*. 10 (75).
- Fracchia, Letizia & Cavallo, Massimo & Martinotti, Maria & Banat, Ibrahim. 2012. Biosurfactants and Bioemulsifiers Biomedical and Related Applications. *Present Status and Future Potentials*. 10.5772/23821.
- Fuerst, J. A. 2010. Beyond Prokaryotes and Eukaryotes: Planctomycetes and Cell Organization. *Nature Education* 3 (9): 44.
- George, S., and Jayachandran, K. 2009. Analysis of Rhamnolipid Biosurfactants Produced Through Submerged Fermentation Using Orange Fruit Peelings as Sole Carbon Source. *Journal of Applied Biochemistry and Biotechnology*, 158 (3): 694-705.
- Gharaei-Fathabad E. 2011. Biosurfactants in pharmaceutical industry: A mini-review. *Am J Drug Discov Dev*, 1: 58-69.

- Gozan, M., Fatimah, N.I., Nanda, C. dan Haris, A. 2014. Produksi Biosurfaktan oleh *Pseudomonas aeruginosa* dengan Substrat Limbah Biodiesel Terozonasi untuk Peningkatan Perolehan Minyak Bumi. *Journal of Agro-based Industry*, 31 (2): 39-44.
- Hamley, Ian W. 2015. Lipopeptides: from self-assembly to bioactivity. *Chem. Commun*, 51: 8574-8583.
- Hentati, Dorra, Alif Chebbi, Fatma Hadrich, Ilhem Frikha, Francesc Rabanal, Sami Sayadi, Angeles Manresa, Mohamed Chamkha. 2019. Production, characterization and biotechnological potential of lipopeptide biosurfactants from a novel marine *Bacillus stratosphericus* strain FLU5. *Ecotoxicology and Environmental Safety*. 167: 441–449.
- Hidayat, N., Padagadan, M. C. dan Suhartini, S. 2006. Mikrobiologi Industri. Yogyakarta.
- Huber *et al.* 2007. Polymeric dispersant. United States Patent. Diakses pada 16 September 2023. <https://patents.google.com/patent/US7265197B2/en>.
- Joshi, S., Bharucha, C., Jha, S., Yadav, S., Nerurkar, A., and Desai, A. J. 2008. Biosurfactant Production Using Molasses and Whey Under Thermophilic Conditions. *J. Bioresour Technol*, 99 (1): 195–199.
- Kapadia, S.G. & Yagnik, Bhupesh. 2013. Current trend and potential for microbial biosurfactants. *Asian J. Exp. Biol. Sci*, 4: 1-8.
- Kashif, Ayesha; Ramla Rehman, Ahmed Fuwad, Muhammad Kashif Shahid, H.N.P. Dayarathne, Asif Jamal, Muhammad Nauman Aftab, Bandita Mainali, Younggyun Choi. 2022. Current advances in the classification, production, properties and applications of microbial biosurfactants. *A critical review, Advances in Colloid and Interface Science*, 306: 102-718.
- Kiran G. S, Priyadharsini S, Sajayan A, Priyadharsini GB, Poulouse N, Selvin J. Production of lipopeptide biosurfactant by a marine *Nesterenkonia* sp. and its application in food industry. *Front Microbiol*, 8.
- Lamilla, Claudio & Schalchli, Heidi & Briceño, Gabriela & Leiva, Barbara & Donoso Piñol, Pamela & Barrientos, Leticia & Rocha, Vanessa & Freire, Denise & Diez, Cristina. 2021. A Pesticide Biopurification System: A Source of Biosurfactant-Producing Bacteria with Environmental Biotechnology Applications. *Journal of Agronomy*. 11: 624.

- Liepina, Janis & Balina, Karina & Soloha, Raimonda & Berzina, Ieva & Lukasa, Liva & Dace, Elina. 2021. Glycolipid Biosurfactant Production from Waste Cooking Oils by Yeast: *Review of Substrates, Producers and Products. Fermentation*, 7: 136.
- Mahreni, Dyah Rachmawati Lucitasari, Mitha Puspitasari. *Biosurfaktan*. Yogyakarta: Lembaga Penelitian dan Pengabdian Kepada Masyarakat UPN Veteran Yogyakarta, 2021.
- Manoruna, Sofia Andini. 2019. Biosintesis Fosfolipid. Diakses pada 17 September 2023. <https://id.scribd.com/document/410298698/Biosintesis-Fosfolipid#>.
- Markets and Markets. 2017. Biosurfactants Market by Type (Glycolipids (Sphorolipids, Rhamnolipids), Lipopeptides, Phospholipids, Polymeric Biosurfactants), Application (Detergents, Personal Care, Agricultural Chemicals, Food Processing), and Region-Global Forecast to 2022.
- McClements D. J, Gumus C. E. 2016. Natural emulsifiers-biosurfactants, phospholipids, biopolymers, and colloidal particles: molecular and physicochemical basis of functional performance. *Adv Colloid Interface Sci*, 234: 3–26.
- Merma, Antonio Gutiérrez., Carlos Alberto Castañeda Olivera, Ronald Rojas Hacha, Mauricio Leonardo Torem, Brunno Ferreira dos Santos. 2019. Optimization of hematite and quartz BIOFLOTATION by AN artificial neural network (ANN). *Journal of Materials Research and Technology*. 8 (3): 3076-3087.
- Mnif, I., Grau-campistany, A. and Coronel-Leon, J. 2016. Purification and Identification of *Bacillus subtilis* SPB1 Lipopeptide Biosurfactant Exhibiting Antifungal Activity Againsts *Rhizoctonia bataticola* and *Rhizoctonia solani*. *Environ Sci Pollut Res*, 23: 6690-6699.
- Najiyah, Durrotun; Nuning Vita Hidayati, dan Cut Nanda Sari. 2013. Manfaat Surfaktan dari Bakteri Laut Hidrokarbonoklastik untuk Akselerator Proses Hidrokarbon Minyak Bumi. *Lembaran Publikasi Minyak dan Gas Bumi*, 47 (2): 97 – 104.
- Nayarisseri A, Singh P, Singh SK 2018. Screening, isolation and characterization of biosurfactant producing *Bacillus subtilis* strain ANSKLAB03. *Bioinformation*, 14 (6): 304-314.
- Ni'matuzahroh, Candra Dewi Agustin, dan Mulyadi Tanjung. 2009. Efektivitas Biosurfaktan dan Surfaktan Sintetis dalam Biodegradasi Komponen

Aromatik Solar Oleh Konsorsium Bakteri. Berk. Penel. *Hayati Edisi Khusus*, 3C: 89–93.

Nitschke, M., Ferraz, C. and Pastore, G. M. 2004. Selection of Microorganism for Biosurfactant Production Using Agroindustrial Wastes. *Brazilian Journal of Microbiology*, 35: 81-85.

Nurhartawan, Lita Audarina. 2023. Optimasi Produksi dan Karakterisasi Biosurfaktan dari Bakteri Sedimen Mangrove Ambon dengan Perbedaan Konsentrasi Sumber Karbon, pH, dan Salinitas Media. *Skripsi*. Fakultas Sains dan Teknologi UIN Syarif Hidayatullah Jakarta.

Nurhasanah. 2023. Optimasi Produksi Biosurfaktan dari Bakteri Isolat Lokal Asal Sedimen Perairan Pelabuhan Panjang, Lampung. *Kimia Padjadjaran*, 2023, 1.2: 74-84.

Olivera N. L., Nieves M. L., Lozada M., del Prado G., Dionisi H. M., Sineriz ~ F. 2009. Isolation and characterization of biosurfactant-producing *Alcanivorax* strains: hydrocarbon accession strategies and alkane hydroxylase gene analysis. *Res Microbiology*.160:19–26.

Olivera, Nelda L., Marina L. Nieves, Mariana Lozada, Guillermo del Prado, Hebe M. Dionisi, Faustino Siñeriz. 2009. Isolation and characterization of biosurfactant-producing *Alcanivorax* strains: hydrocarbon accession strategies and alkane hydroxylase gene analysis. *Journal of Research in Microbiology*, 160 (1): 19-26.

Onaizi SA. 2021. Statistical analyses of the effect of rhamnolipid biosurfactant addition on the enzymatic removal of Bisphenol A from wastewater. *Biocatal Agric Biotechnol*, 32: 101929.

Patel K, Patel M. 2020. Improving bioremediation process of petroleum wastewater using biosurfactants producing *Stenotrophomonas* sp. S1VKR-26 and assessment of phytotoxicity. *Bioresour Technol*, 315: 123861.

Prihanto, A. Awaludin; H. Dwi Laksono Timur, A. Abdul Jaziri, R. Nurdiani, dan K. A. Pradameswari. 2018. Isolasi dan Identifikasi Bakteri Endofit Mangrove *Sonneratia alba* Penghasil Enzim Gelatinase dari Pantai Sendang Biru, Malang, Jawa Timur. *Indonesia Journal of Halal*, 1 (1): 31-42.

Purbonoto, G dan Chomsyarini. 2011. Perancangan dan Pembuatan Inkubator Bakteri untuk Mengetahui Jumlah Bakteri dalam Proses Pembuatan Kertas Menggunakan PLC. ITS Library. Surabaya

- Putri, Monica dan Rukman Hertadi. 2015. Effect of Glycerol as Carbon Source for Biosurfactant Production by Halophilic Bacteria *Pseudomonas Stutzeri* BK-AB12. *Procedia Chemistry*:16 (3): 21-27.
- Raj, Aman & Dames, Joanna & Kumar, Ashwani. 2021. Tapping the Role of Microbial Biosurfactants in Pesticide Remediation: An Eco-Friendly Approach for Environmental Sustainability. *Frontiers in Microbiology*. 12: 791723.
- Rane, A. N., Baikar, V. V. and Deopurkar, R. L. 2017. Agro-Industrial Wastes for Production of Biosurfactant by *Bacillus subtilis* ANR 88 and its Application in Synthesis of Silver and Gold Nanoparticles. *Frontiers in Microbiologi*, 8 (492): 1-12.
- Reningtyas, Renung; Mahreni., 2015. Biosurfaktan. *Eksergi*, 12 (2): 12-22.
- Rincon-Fontan, Rodríguez-Lopez L., Vecino X., Cruz J. M., Moldes A. B. 2020. Potential application of a multifunctional biosurfactant extract obtained from corn as stabilizing agent of vitamin C in cosmetic formulations. *Sustain Chem Pharm*. 16: 100-248.
- Riyanto, Cindy Lukyta Ratih., Sumardi, Salman Farisi, Christina Nugroho Ekowati, Achmad Arifiyanto. 2021. Aktivitas Biosurfaktan *Serratia Marcescens* strain MBC1 dalam Mengemulsikan Solar dengan Variasi pH dan Media. *Jurnal Sumberdaya Alam dan Lingkungan*, 8 (3): 114-122.
- Rodrigues L. R, J. A. Teixeira dan R. Olivera. 2006. Low cost fermentative medium for biosurfactant production by probiotic bacteria. *Biochem Engin J*, 32: 135-142.
- Rodrigues LR. 2015. Microbial surfactants: fundamentals and applicability in the formulation of nano-sized drug delivery vectors. *J Colloid Interface Sci*, 449 (3): 4–16.
- Rosi, Ria Mela., Nurhasanah., Ilim., Heri Satria., Mulyono. 2022. Optimasi Produksi Biosurfaktan dari Bakteri Indigen *Bacillus* sp. PKT D4 dengan Variasi Sumber Nitrogen. *Prosiding*. 57-65.
- Rusmawijayanto., Sri Luliana, dan Isnindar. 2019. Profil Kromatografi Lapis Tipis Ekstrak Etanol Daun Senggani (*Melastoma malabathricum* L.) Metode Perkolasi. *Jurnal Farmasi Kalbar Universitas Tanjungpura*. 4 (1).
- Sachdev, D. P., and Cameotra, S. S. 2013. Biosurfactants in Agriculture. *Applied Microbiology and Biotechnology*, 97 (3): 1005-1016.

- Sachdev, Kuldeep Bauddh, Rana Pratap Singh. 2023. Prospective of biosurfactant in management of fusarium wilt and early blight of *Lycopersicon esculentum*. *Plant Stress*, 7: 100126.
- Sakinah, Isti Fanya. 2019. Karakteristik Surfaktan Pada Proses Perolehan Minyak dari Air Formasi. *Skripsi*. Program Studi Kimia Fakultas Sains dan Teknologi. Universitas Islam Negeri Syarif Hidayatullah.
- Salek, K., Euston, S.R. 2019. Sustainable microbial biosurfactants and bioemulsifiers for commercial exploitation. *Process Biochemistry*, 85: 143-155.
- Santos D.K.F, Rufino R.D, Luna J.M, Santos V.A, Sarubbo L.A. 2016. Biosurfactants: multifunctional biomolecules of the 21st century. *Int J Mol Sci*, 17.
- Saravanan, V. and Vijayakumar, S. 2012. Isolation and screening of biosurfactant producing microorganisms from oil contaminated soil. *J. Acad. Indus. Res.* Vol. 1(5).
- Saravanan, V. and Vijayakumar, S. 2012. Isolation and Screening of Biosurfactant Producing Microorganisms from Oil Contaminated Soil. *J. Acad. Indus. Res*, 1 (5).
- Sarubbo, Leonie A; Maria da Gloria C. Silva, Italo Jose B. Durval, Karen Gercyane O. Bezerra, Beatriz G. Ribeiro, Ivison A. Silva, Matthew S. Twigg, Ibrahim M. Banat. 2022. Biosurfactants: Production, properties, applications, trends, and general perspectives. *Biochemical Engineering Journal*, 181: 108-377.
- Sen, Suparna., Siddhartha Borah., Bora Arijit dan Deka Suresh. 2017. Production, Characterization, and Antifungal Activity of a Biosurfactant Produced by *Rhodotorula babjevae* YS3. *Microbial Cell Factories*. 16: 10.
- Setiani N. A., Agustina N., Mardiah I., Hamdani S., Astriany D., 2020. Potensi *Bacillus cereus* dalam produksi biosurfaktan. *Jurnal Biologi Udayana*, 24 (2): 135-141.
- Sharma, D., B. Saharan, and R. Sahu. 2011. A Review on Biosurfactants: Fermentation, Current Developments and Perspectives. *Genetic Engineering and Biotechnology Journal*, 20 (2): 29–32.
- Sibuea, Posman; Sri Raharjo, Umar Santoso, dan Zuheid Noor. 2008. Peran Misel Surfaktan Terhadap Partisi Antioksidan Dan Stabilitas Oksidatif Emulsi Minyak dalam Air. *Jurnal Teknol dan Industri Pangan*, 19 (1): 47.

- Sinha, Rupesh Kumar, K. P Krishnan, P.John. 2021. Complete genome sequence and comparative genome analysis of *Alcanivorax* sp. a marine alkane-degrading bacterium isolated from hydrothermally-influenced deep seawater of southwest Indian ridge. *Journal of Genomics*, 1 (2): 884-891.
- Sumathi R, Yogananth N. Isolation and identification of biosurfactant producing *Pseudomonas aeruginosa* from marine sediment samples and its antimicrobial properties. 2016. *International Journal of Advanced Research in Biological Sciences*, 3 (12): 200–12.
- Sumiardi, A. 2021. Karakterisasi Biokimia Biosurfaktan yang Dihasilkan Bakteri *Alteromonas Macleodii* Y 18228 Sebagai Agen Pendegradasi Senyawa Hidrokarbon. *Jurnal Lingkungan dan Sumberdaya Alam (JURNALIS)*, 4 (1): 43-55.
- Techaoei, S., Lumyong, Prathumpai, Santiarwarn, D., & Leelapornpisid, P. 2011. Screening characterization and stability of biosurfactant produced by *Pseudomonas aeruginosa* SCM106 isolated from soil in northern thailand. *Asian Journal of Biological Sciences*, 4 (4): 340-350.
- Thirumurugan, Durairaj., Dhayalakrishnan Kokila, Thirupathi Balaji, Rajaram Rajamohan, Mohamad S. Al Salhi, Sandhanasamy Devanesan, Aruliah Rajasekar, Punniyakotti Parthipan. 2023. Impact of biosurfactant produced by *Bacillus spp.* on biodegradation efficiency of crude oil and anthracene. *Chemosphere*, 344: 140340.
- Umroh. 2011. Bioremediasi Pencemaran Minyak di Sedimen Pantai Balongan, Indramayu dengan Menggunakan Bakteri *Alcanivorax* sp. TE-9 Skala Laboratorium. *Jurnal Sumberdaya Perairan*. 5 (2): 23-31.
- Vandana, P., Singh, D. 2018. Review on biosurfactant production and its application. *Int. J. Curr. Microbiol. Appl. Sci.*, 7: 4228-4241.
- Vecino X, Cruz JM, Moldes AB, Rodrigues LR. 2017. Biosurfactants in cosmetic formulations: trends and challenges. *Crit Rev Biotechnol*, 37 (9): 11–23.
- Walter, V., Syldatk, C., Hausmann, R. 2010. Screening Concepts for The Isolation of Biosurfactant Producing Microorganisms. *Adv Exp Med Biol*, 672: 1-13.
- Wei Y-H, Lai H-C, Chen S-Y, Yeh M-S, Chang J-S. 2004. Biosurfactant production by *Serratia marcescens* SS-1 and its isogenic strain SMΔR defective in SpnR, aquorum-sensing LuxR family protein. *Biotechnol Lett*, 26: 799–802.

- Wibisana, A. 2018. Isolasi dan Skrining Mikroba Penghasil Biosurfaktan dari Air Laut Tercegar Minyak. *Jurnal Ilmiah Teknik Kimia UNPAM*. 2(2):11-18.
- Widyaningsih, Ratna. 2017. Pengaruh Konsentrasi Surfaktan Anionik Terhadap Salinitas Optimum dalam Mikroemulsi Spontan dengan Sample Minyak Lapangan M. *Jurnal Mineral, Energi, dan Lingkungan*, 1 (1): 60-65.
- Wirajana, I. N., Yuliana, D. A., & Ratnayani, K. (2013). Isolasi DNA Metagenomik dari Tanah Hutan Mangrove Pantai Suwung Bali. *Jurnal Kimia*, 7 (1), 19- 24.
- Yataghene, A. M., Abouseoud, R., Maachi and Amrane, A. 2008. Effect of the Carbon and Nitrogen Sources on Biosurfactant Production by *Pseudomonas fluorescens* Biosurfactant Characterization.
- Yea D, Jo S, Lim J. 2019. Synthesis of eco-friendly Nano-structured biosurfactants from vegetable oil sources and characterization of their interfacial properties for cosmetic applications. *MRS Adv*. 4: 377–84.
- Yuliana, Cut; Rukman Hertadi, Deana Wahyuningrum. 2019. Produksi dan Optimasi Biosurfaktan dari Bakteri Halofilik *Chromohalobacter japonicus* BK-AB18, 2 (2): 56-65.
- Yuliana, Cut; Rukman Hertadi, Deana Wahyuningrum. 2019. Produksi dan Optimasi Biosurfaktan dari Bakteri Halofilik *Chromohalobacter japonicus* BK-AB18. *CHEESA*, 2 (2): 56-65.
- Zargar A. N, Mishra S, Kumar M, Srivastava P. 2022. Isolation and chemical characterization of the biosurfactant produced by *Gordonia* sp. IITR100. *PLoS ONE*, 17 (4): e0264202.
- Zarinviarsagh M., G. Ebrahimipour, H. Sadeghi. 2016. Lipase and biosurfactant from *Ochrobactrum* intermedium strain MZV101 isolated by washing powder for detergent application, *Lipids Health Dis*. 16: 177.