

DAFTAR PUSTAKA

- [BPS] Badan Pusat Statistik, 2023. Statistik Karet Indonesia 2022. Direktorat Jendral Perkebunan. Jakarta.
- [Dekarindo] Dewan Karet Indonesia, 2021. *Data Industri Karet Indonesia*. Dewan Karet Indonesia. Jakarta.
- [Dirjenbun] Direktorat Jenderal Perkebunan, 2021. Statistike Perkebunan Unggulan Nasional 2020-2022. Direktorat Jenderal Perkebunan, Kmetrian Pertanian. Jakarta.
- [Kemendagri] Kementerian Perdagangan Republik Indonesia, 2023. Realisasi Ekspor Karet dan Produk Karet Indonesia 2018-2023 (Januari-Mei). Pusat Data dan Sistem Informasi. Jakarta.
- Abbot V, Paliwal D, Sharma A, Sharma P, 2022. A review on The Physicochemical and Biological Application of Biosurfactants in Biotechnology and Pharmaceuticals. *Heliyon*. 8: 1-12.
- Aghna A, Lisnawati, Lahmuddin, 2019. Potensi *Fusarium* Non Patogenik untuk mengendalikan *Fusarium oxysporum* f.sp. *cubense* pada Tanaman Pisang Barangan. *Jurnal Agroekoteknologi FP USU*. 7: 303-311.
- Aji OR, Sari AK, Putri DA, 2022. Isolasi dan Uji Aktivitas Antagonisme Jamur Endofit Tanaman Pisang (*Musa paradisiaca* L.) Terhadap *Fusarium oxysporum*. *Bioscientist*. 10: 10-17.
- Akbari S, Abdurahman NH, Yunus RM, Fayaz F, Alara OR, 2018. Biosurfactants— a new frontier for social and environmental safety: a mini review. *Biotechnology Research and Innovation*. 2: 81–90.
- Akmalasari I, Purwati ES, Dewi S, 2013. Isolasi Dan Identifikasi Jamur Endofit Tanaman Manggis (*Gracinia mangostana* L.). *Biosfera*. 30: 82-89.
- Alexopoulos, 1996. *Introductory Mycology Fourth Edition*. Canada: United Stated Of Amerika.

- Alt K, Sireesha NG, Akg A, 2014. Production Optimization of Rhamnolipid Biosurfactants by *Streptomyces coelicoflavus* (NBRC 15399 T) using Plackett-Burman Design. *Eur J Biotechnol Biosci.* 1: 7-13.
- Amagliani L, O'Regan J, Kelly AL, O'Mahony JA, 2022. Influence of low molecular weight surfactants on the stability of model infant formula emulsions based on hydrolyzed rice protein. *LWT.* 154: 112544.
- Amaria W, Soesanthi F, Ferry Y, 2016. Keefektifan Biofungisida *Trichoderma* sp. dengan Tiga Jenis Bahan Pembawa Terhadap Jamur Akar Putih *Rigidoporus microporus*. *JIDTP.* 3: 37-44.
- Amaria W, Taufiq E, Harni R, 2013. Seleksi dan Identifikasi Jamur Antagonis sebagai Agens Hayati Jamur Akar putih (*Rigidoporus microporus*) pada Tanaman Karet. *Buletin Risti.* 4: 55-64.
- Amelia N, Sulistiyaning TH, 2021. Kajian Pengaruh Penggunaan Biosurfaktan Rhamnolipida dan Surfaktin pada Proses Bioremediasi Tanah Tercemar Crude Oil. *Jurnal Teknik ITS.* 10: 76-81.
- Amezcu-Vega C, Poggi-Varaldo HM, Esparza-Garcia F, Rios-Leal E, Rodriguez-Vazquez R, 2005. Effect of Culture Conditions on Fatty Acids Composition of a Biosurfactant Produced by *Candida ingens* and Changes of Surfaces Tension of Culture Media. *Bioresource Technology.* 98: 237-240.
- Andrade RFS, Antunes AA, Lima RA, Araujo HWC, Resende-Stoianoff MA, Franco LO, Campos-Takaki GM. Enhanced Production of a Glycolipid Biosurfactant Produced by *Candida glabrata* UCP/WFCC 1556 for Application in Dispersion and Removal of Petroderivatives. *International Journal of Current Microbiology and Applied Sciences.* 4: 334-341.
- Anwar C, 2001. *Manajemen dan Teknologi Budidaya Karet.* Pusat Penelitian Karet. Medan.
- Bahia FM, De Almeida GC, De Andrade LP, Campos CG, Queiroz LR, Da Silva RLV, Abdelnur PV, Correa JR, Berttiga M, Parachin NS, 2018.

Rhamnolipids Production from Secrose by Engineered *Saccharomyces cerevisiae*. *Scientific Reports*. 8: 1-10.

- Bahri S, Amelia P, Rachmawati N, Firdausya AF, Ramadha F, 2021. Antibakteri Ekstrak Kapang Endofit dari Akar Kayu Jawa (*Lannea coromandelica* (Houtt.) Merr.). *Jurnal Bioteknologi & Biosains Indonesia*. 8: 267-275.
- Balitri. 2014. Jamur Akar Putih Penyakit Berbahaya pada Perkebunan Karet. <http://balittri.litbang.pertanian.go.id/index.php/berita/infoteknologi/202-jamur-akar-putih-penyakit-berbahayapada-perkebunan-karet>.
- Banat IM, Franzetti A, Gandolfi I, Bestetti G, Martinotti MG, Fracchia L, Smyth TJ, Marchant R, 2010. Produksi Biosurfaktan Mikroba, Aplikasi dan Potensi Masa Depan. *Aplikasi Mikrobiol Bioteknologi*. 87: 427–444.
- Basuki, 1986. *Penyakit dan Gangguan pada Tanaman Karet*. Pusat Penelitian dan Pengembangan Perkembangan Tanjung Morawa. Medan.
- Bhati S, Kumar V, Singh S, Singh J, 2019. Synthesis, Biological Activities and Docking Studies of Piperazine Incorporated 1, 3, 4-oxadiazole derivatives. *Journal of Molecular Structure*. 1191: 197–205.
- Cameotra SS and Scadev DP. 2013. Biosurfactants in Agriculture. *Appl Microbiol Biotechnol*. 97: 1005-1016.
- Cipinyete V, Grigiskis S, Sapokaite D, 2011. Production of Biosurfactants by *Arthrobacter* sp. N3, a Hydrocarbon Degrading Bacterium. In: Noviks G, Ansone V (eds) *Proceedings of the 8th International Scientific and Practical Conference, Latvia, June 2011*, vol 1. RA Izdevniecība, pp 68–75
- Cooper DG, Goldenberg BG, 1987. Surface Active Agents from Two *Bacillus* Species. *Appl Environ Microbiol*. 53: 224–229.

- Coronel-Leon J, de Grau G, Grau-Campistany A, 2015. Biosurfactant Production by AL 1.1, a *Bacillus licheniformis* Strain Isolated From Antarctica: Production, Chemical Characterization, and Properties. *Ann Microbiol.* 65: 2065-2078.
- da Costa JF, Langkun JF, Setyawan B, Berlian I, Rondonuwu F, Karwur FF, Martosupono, 2016. Identifikasi Gejala Serangan dan Teknik Isolasi Jamur Akar Putih (*Rigidoporus microporus*) pada Tanaman Karet. Prosiding Seminar Nasional Pengendalian Penyakit pada Tanaman Pertanian Ramah Lingkungan II Perhimpunan Fitopatologi Indonesia Komda Joglosemar (p.166-177). Yogyakarta, Indonesia: Perhimpunan Fitopatologi Indonesia Komda Joglosemar.
- Dalimunthe CI, Soekarno BPW, Munif A, Surono, 2019. Seleksi dan Uji Potensi Cendawan *Dark Septate Endophyte* Sebagai Agensia Hayati Penyakit Jamur Akar Putih (*Rigidoporus microporus*) pada Tanaman Karet. *Jurnal Penelitian Karet.* 37: 11-20.
- Dawolo B, Puspita F, Armaini, 2017. Identifikasi Jamur Endofit dari Tanaman Karet dan Uji In-Vitro Anti Mikroba Terhadap *Rigidoporus microporus*. *Jom FAPERTA.* 4: 1-11.
- Desai JD dan Desai AJ. 1993. Production of Biosurfactant. In : Biosurfactant: Production, Properties, Application. Kosaric (ed). Marcel Dekker Inc. New York.
- Dhiman R, Meena KR, Sharma A, Kanwar SS, 2016. Biosurfactants and Their Screening Methods. *Research Journal of Recent Sciences.* 5: 1-10.
- Dinas Perkebunan Kalimantan Timur, 2018. Jamur Akar Putih (JAP) Penyakit Berbahaya pada Perkebunan Karet <https://disbun.kaltimprov.go.id/artikel/jamur-akar-putih-jap-penyakit-berbahaya-pada-perkebunan-karet>
- Drakontis CE, Amin S, 2020. Biosurfactants: Formulations, Properties, and Applications. *Current Opinion in Colloid and Interface Science.* 48: 77-90.

- Fenibo EO, Douglas SI, Stanley HO, 2019. A review on microbial surfactants: production, classification, properties and characterization. *J Adv Microbiol.* 18: 1–22.
- Fitria AN, Zulaikha E, 2018. Aklimatisasi pH dan Pola Pertumbuhan *Bacillus cereus* S1 Pada Medium MSM Modifikasi. *Jurnal Sains dan Seni ITS.* 7:39
- Fuchs J-G, Moenne-Loccoz Y, Defago G., 1997. Nonpathogenic *Fusarium oxysporum* Strain Fo47 Induces Resistance to *Fusarium wilt* in Tomato. *Plant Dis.* 81: 492-496.
- Gautam G, Mishra V, Verma P, 2014. A Cost Effective Strategy for Production of Biosurfactant from Locally Isolated *Penicillium chrysogenum* SNP5 and Its Applications. *J Bioprocess Biotechn.* 4: 1.
- Go ZW, Chin KL, H`ng PS, Wong MY, Luqman CA, Surendran A, Tan GH, Lee CL, Khoo PS, Kong WJ, 2021. Virulence of *Rigidoporus microporus* Isolates Causing White Root Rot Disease on Rubber Trees (*Hevea brasiliensis*) in Malaysia. *Plants.* 10: 1-15.
- Gudiña E., Rodrigues AI, Alves E, Domingues MR, Teixeira JA, Rodrigues LR. 2015. Bioconversion of agro-industrial by-products in rhamnolipids toward applications in enhanced oil recovery and bioremediation. *Bioresource Technology.* 177: 87–93.
- Harborne, 1987. *Metode Fitokimia: Penuntun Cara Modern Menganalisis Tumbuhan.* Edisi I. Terjemahan Kosasih Padmawinata dan Iwang Soediro. Bandung: Penerbit ITB.
- Ishaq U, Akram MS, Iqbal Z, 2015. Production and Characterization of Novel Self-assembling Biosurfactants from *Aspergillus flavus*. *J Appl Microbiol.* 119: 1035-1045.
- Jadhav M, Kagalkar A, Jadhav S, 2011. Isolation, Characterization, and Antifungal Application of Biosurfactant Produced by *Enterobacter* sp. MS16. *Eur J Lipid Sci Technol.* 113: 1347-1356.

- Jahan R, Bodratti AM, Tsianou M, Alexandridis P, 2020. Biosurfactants, natural alternatives to synthetic surfactants: Physicochemical properties and applications. *Adv Colloid Interface Sci.* 275.
- Kannahi M, Sherley M, 2007. Biosurfactant Production by *Pseudomonas putida* and *Aspergillus niger* from Oil Contaminated Site. *International Journal Chemical and Pharmaceutical Sciences.* 3: 37-43.
- Karlapudi AP, Venkateswarulu, TC, Tammineedi J, Kanumuri L, Ravuru BK, Dirisala V, Ramu, Kodali, VP, 2018. Role of biosurfactants in bioremediation of oil pollution-a review. *Petroleum.* 4 (3): 241–249.
- Khoirunnisa FR, Sektiono AW, Djauhari S, Aini LQ, 2024. Uji Potensi Jmur Penghasil IAA Sebagai Pengendali Hayati Patogen Layu *Fusarium oxysporum* pada Tanaman Cabai. *Jurnal Hama dan Penyakit Tanaman.* 12: 25-41.
- Kiran GS, Hema TA, Gandhimathi R, 2009. Optimization and Production of a Biosurfactant from The Sponge-associated Marine Fungus *Aspergillus ustus* MSF3. *Colloids Surf B Biointerfaces.* 73: 250-256.
- Kosaric N. 2001. Biosurfactants and Their Application for Bioremediation. *Food Technol. Biotechnol.* 39: 295-304.
- Kumar A, Rabha J, Jha DK, 2021. Antagonistic Activity of Lipopolipeptide-Biosurfactant Producing *Bacillus subtilis* AKP, Against *Colletotrichum capsici*, The Causal Organism of Anthracnose Disease of Chilli. *Biocatalysis and Agricultural Biotechnology.* 36: 1-14
- Kurniasari N, Hidayati NA, Wahyuni T, 2019. Identifikasi Cendawan yang Berpotensi Menyebabkan Penyakit Busuk Kuning pada Batang Tanaman Buah Naga. *Ekotonia: Jurnal Penelitian Biologi, Botani, Zoologi dan Mikrobiologi.* 4: 1-6.
- Liyanage AS, Rubber IN, Hillocks LRJ, Waller JM, 1997. Soilborne disease of tropical crops. CAB International, pp. 331-347.

- Mahalingam P, Sampath N, 2014. Isolation, characterization and identification of bacterial biosurfactant. *Eur. J. Exp. Biol.* 4: 59–64.
- Maherani VFA, Mubarik NR, Priyanto JA, Putra IP, 2024. Biosurfactant Activity of *Bacillus* sp. Strain LP04 Isolate and Its Antifungal Potency Against *Ganoderma boninense* and *Fusarium* sp. *Hayati: Journal of Biosciences*. 31: 726-732.
- Mariastuti HD, Listiyowati S, Wahyudi AT, 2018. Antifungal activity of soybean rhizosphere *actinomycetes* producing bioactive compounds against *Fusarium oxysporum*. *Biodiversitas*. 19: 2127–2133.
- Maryani N, Harahap RO, Khastini RO, Ahmad F, 2023. Deteksi Penyakit Layu *Fusarium* pada Pisang-Pisang Lokal di Pandeglang. *Jurnal Fitopatologi Indonesia*. 19: 133-144.
- Melsilawati W, Khotimah S, Linda R, 2012. Jamur yang Terdapat pada Tubuh Lalat Rumah (*Musca domestica* L.1758). *Jurnal Protobiont*. 1: 92-101.
- Morita T, Konishi M, Fukuoka T, Imura T, Kitamoto HK, Kitamoto D, 2007. Characterization of The Genus *Pseudozyma* by The Formation of Glycolipid Biosurfactants, Mannosylerythritol Lipids. *FEMS Yeast Research*. 7: 286-292.
- Muslim A, 2015. *Fusarium* Nonpatogen sebagai Agens Hayati Penyakit Rebah Kecambah pada Tanaman Terung. *Jurnal Fitopatologi Indonesia*. 11: 23-28.
- Nayarisseri A, Singh P, Singh SK, 2018. Screening, Isolation and Characterization of Biosurfactant Producing *Bacillus subtilis* Strain ANSKLAB03. *Bioinformation*. 14: 304-314.
- Nurhasanah, Sheiscatamaya V, Bahri S, Laila A, Kiswandono AA, Juliasih NLGR, 2023. Optimasi Produksi Biosurfaktan dari Bakteri Isolat Lokal Asal Sedimen Perairan Pelabuhan Panjang, Lampung. *Kimia Padjadjaran*. 1: 74-84.

- Ochsner UA, Koch K, Fiechter A, Reiser J, 2002. Isolation and Characterization of a Regulatory Gene Affecting Rhamnolipid Biosurfactant Synthesis in *Pseudomonas aeruginosa*. *Journal of Bacteriology*. 176: 2044-2054.
- Pradina AS. 2023. Peningkatan Produksi Biosurfaktan Lipopeptida Dari Bakteri *Bacillus cereus* ALP E1 Menggunakan Substrat Limbah Cair Minyak Kelapa Sawit. [Skripsi]. Bandar Lampung: Universitas Lampung, Program Sarjana.
- Praja RN, Yudhana A, 2017. Isolasi dan Identifikasi *Aspergillus* spp. pada Paru-Paru Ayam Kampung yang Dijual di Pasar Banyuwangi. *Jurnal Medik Veteriner*. 1: 6-11.
- Prasetyo J, Aeny TN, 2013. The Preventive Control of White Root Rot Disease in Small Holder Rubber Plantation Using Botanical, Biological and Chemical Agents. *Jurnal Hama dan Penyakit Tumbuhan Tropika*. 13: 69-74.
- Premjanu N, Jaynthy C, Diviya S, 2016. Antifungal Activity of Endophytic Fungi Isolated From *Lannea coromandelica*-An Insilico Approach. *International Journal of Pharmacy and Pharmaceutical Sciences*. 8: 207-210.
- Putri WS, Warditiani NK, Larasanty LPF, 2013. Screening Fitokimia Ekstrak Etil Asetat Kulit Buah Manggis (*Gracinia mangostana* L.). *Jurnal Farmasi Udayana*. 2: 56-60.
- Qazi MA, Subhan M, Fatima N, 2013. Role of Biosurfactant Produced by *Fusarium* sp. BS-8 in Enhanced Oil Recovery (EOR) Through Sand Pack Column. *Int J Biosci Biochem Bioinform*. 30: 1065-1075.
- Rahayu BR, Proborini MW, Darmayasa IBG, 2019. Isolasi, Identifikasi dan Persentase Keberadaan Hifa Jamur Endofit pada Tanaman Gemitir (*Tagetes erecta* L.) DI Beberapa Daerah di Bali. *Metamorfosa: Journal of Biological Sciences*. 6: 75-82.

- Ramos da Silva A, Manresa, MÁ, Pinazo A, García MT, Pérez L, 2019. Rhamnolipids functionalized with basic amino acids: Synthesis, aggregation behavior, antibacterial activity and biodegradation studies. *Colloids Surf B Biointerfaces*. 181: 234–243.
- Reddy SR, Fogler HS, 1981. Emulsion Stability: Determination from Turbidity. *J Colloid Interface Sci*. 79: 101–104.
- Redig P. 2005. Mycotic Infection in Birds I: Aspergillosis. North American Veterinary Conference Proceedings, Eastern States Veterinary Association 1192-1194.
- Rizky MY, Fitri RD, Hastuti US, Prabaningtyas S, 2017. Identifikasi Uji Kemampuan Hidrolisis Lemak dan Penentuan Indeks Zona Bening Asam Laktat pada Bakteri dalam Wadi Makanan Traditional Kalimantan Tengah. *Bionature* 18: 87–98.
- Rowe RC, 2009. *Handbook of Pharmaceutical Excipients*, 6th Ed.. London: The Pharmaceutical Press.
- Sachdev DP, Cameotra SS, 2013. Biosurfactants in Agriculture. *Applied Microbiology and Biotechnology*. 97: 1005-1016.
- Sadati R, Barghi A, Larki RA, 2015. Isolation and Screening of Lipolytic fungi From Coastal Waters of The Southern Caspian Sea (North of Iran). *Jundishapur J Microbiol*. 8: 1-7.
- Santosa, 2007. *Teknik Penyiapan Karet*. Departemen Agronomi Fakultas Pertanian Brawijaya. Malang.
- Sari W, Wiyono S, Nurmansyah A, Munif A, Poerwanto R, 2017. Keanekaragaman dan Patogenitas *Fusarium* spp. Asal Bebebrapa Kultivar Pisang. *Jurnal Fitopatologi Indonesia*. 13: 216-228.
- Saruni NH, Razak SA, Habib S, 2019. Comparative screening methods for the detection of biosurfactant-producing capability of antarctic hydrocarbon-degrading *Psuedomonas* Sp. *J Environ Microbiol Toxicol*. 7: 44–47.

- Satpute SK, Banpurkar AG, Dhakephalkar PK, Banat IM, Chopade BA. 2010. Metode untuk menyelidiki biosurfaktan dan bioemulsifier: Tinjauan. *Kritikus Rev Bioteknologi*. 30: 127–144.
- Scott MJ, Jones MN, 2000. Biodegradasi surfaktan di lingkungan. *Biochim Biophys Acta*. 1508: 235–251.
- Semangun H, 1988. *Penyakit-Penyakit Tanaman Perkebunan di Indonesia*. UGM Press. Yogyakarta.
- Semangun H, 1991. *Penyakit-Penyakit Tanaman Perkebunan di Indonesia*. Gajah Mada University Press. Yogyakarta.
- Semangun H, 2008. *Penyakit-Penyakit Tanaman Perkebunan di Indonesia*. Gajah Mada University Press. Yogyakarta.
- Semangun, H. 2000. *Penyakit-Penyakit Tanaman Hortikultura di Indonesia*. Edisi ke-4. Gajah Mada University Press. Yogyakarta.
- Setiawan DH, Andoko A, 2005. *Petunjuk Lengkap Budi Daya Karet*. Agromedia Pustaka. Jakarta.
- Shekhar S, Arumugam S, dan Thangavel B. 2015. Biosurfactant Producing Microbes and Their Potential Applications: A Review. *Critical Reviews In Environmental Science and Technology*. 45: 1522-1554.
- Siangian N, 2015. *Cara Modern Mendongkrak Produktivitas Tanaman Karet*. Pusat Penelitian Karet. Sungai Putih.
- Silva TP, Pixao SM, Tavares J, Gil CV, Torres CAV, Freitas F, Alves L, 2022. A New Biosurfactant/Bioemulsifier from *Gordonia alkanivorans* Strain 1B: Production and Characterization. *Procces*. 10: 1-18.
- Sine Y, Soetarto, Endang S, 2018. Isolasi dan identifikasi kapang *Rhizopus* pada tempe gude (*Cajanus cajan* L.): Savana Cendana. *Jurnal pertanian lahan kering*. 3: 67-68.

- Singh P, Patil Y, Rale V, 2019. Biosurfactant production: emerging trends and promising strategies. *Journal Appl Microbiol.* 126: 2–13.
- Siswanto, Sumarmadji, Situmorang A, 2004. Status dan Pengendalian Penyakit Kering Alur Sadap Tanaman Karet. Prosiding Pertemuan Teknis Strategi Pengelolaan Penyakit Tanaman Karet untuk Mempertahankan Potensi Produksi Mendukung Industri Perkaretan Indonesia Tahun 2020. Palembang.
- Situmorang A, Budiman A, 2003. *Penyakit Tanaman Karet dan Pengendaliannya*. Balai penelitian Sembawa Pusat Penelitian Karet, Palembang.
- Situmorang A, Setyaningtyas H, Pawirosoemardjo S, 2007. Current Status Of White Root Disease (*Rigidoporus microporus*) and The Disease Control Management In Rubber Plantation Of Indonesia. *Proc. International Workshop on WHITE Root Disease of Hevea Rubber* (pp.27-33). Salatiga, Indonesia: RRI.
- Sourav D, Susanta M, Aniruddha G, 2015. A review on natural surfactants. *RSC Adv.* 5: 65757–65767.
- Sulistyawati W, Wahyudi, Trinuryono S, 2022. Analisis (Deskriptif Kuantitatif) Motivasi Belajar Siswa Dengan Model Blended Learning Di Masa Pandemi Covid 19. *Kadikma*, 13: 68–73.
- Surono, Narisawa K, 2017. The Dark Septate Endophytic Fungus *Phialocephala fortinii* is a Potential Decomposer of Soil Organic Compounds and a Promoter of *Asparagus officinalis* Growth. *Fungal Ecology*, 28: 1-10.
- Sutejo AM, Priyatmojo A, Wibowo A, 2008. Identifikasi Morfologi Beberapa Spesies Jamur Fusarium. *Jurnal Perlindungan Tanaman*. 14: 7-13.
- Syarifa LF, Agustina DS, Alamsyah A, Nugraha IS, Asywadi H, 2023. Outlook Komoditas Karet Alam Indonesia 2023. *Jurnal Penelitian Karet*. 41: 47-58.

- Tim Penebar Swadaya, 2008. *Panduan Lengkap Karet*. Penebar Swadaya. Jakarta.
- Tim Penulis PS, 2005. *Karet*, Strategi Pemasaran Budidaya dan pengolahan. Penebar Swadaya. Jakarta.
- Tim Penulis PS. 2008. *Panduan Lengkap Karet*. Penebar Swadaya. Jakarta.
- Toy BAI, Languin JF, Karwur FF, Setyawan B, Berlian I, Rondonuwu FS, Martosupono M, da Costa JF, 2018. Komparasi Morfologi Bebebrapa Koloni Jamur Akar Putih (*Rigidoporus microporus*) dari Perkebunan Karet di Jawa Tengah dan Sumatera Selatan. *Jurnal Penelitian Karet*. 36: 137-146.
- Trindade M, Sithole N, Kubicki S, Thies S, Burger A, 2022. Screening Strategies for Biosurfactant Discovery. *Advances in Biochemical Engineering*. 181: 17-52.
- Tulloch AP, Spencer JFT, Deinema MH, 1968. A New Hydrox Fatty Acid Sophoroside from *Candida bogoriensis*. *Canadian Journal of Chemistry*. 46: 345-348.
- Varadavenkatesan T, Murty VR, 2013. Production of Lipopeptide Biosurfactant by a Novel *Bacillus* sp. and Its Applicability to Enhanced Oil Recovery. *ISRN Microbiol*. 2013: 621519.
- Wahono F, 2019. Pengujian Kompos Limbah Media Baglog Jamur dan Biochar Cangkang Kernel Kelapa Sawit pada Bibit Okulasi Karet (*Hevea brasiliensis*) yang Ditumpangisari dengan Tanaman Karet. [Skripsi]. Medan: Universitas Medan Area, Program Sarjana.
- Wahyuni M, Simanjutak JH, Sitompul IO, 2018. Efektivitas Fungisida Berbahan Aktif Heksakonazol terhadap Penyakit Jamur Akar Putih Bibit Tanaman Karet (*Hevea brasiliensis*). *Agrotekma: Jurnal Agronomi dan Ilmu Penelitian*. 3: 1-9.
- Watanebe T, 2002. Pictorial Atlas of Soil and Seed Fungi Morphologies of Cultured Fungi and Key to Species. CRC Prees LLC.U.S.A.

- Wibisana A, 2018. Isolasi dan *screening* mikroba penghasil biosurfaktan dari air laut yang tercemar minyak. *Jurnal Ilmiah Teknik Kimia*. 2: 55-62.
- Williams W, Trindade M. 2017. Metagenomics for the discovery of novel biosurfactants. In: Charles T, Liles M, Sessitsch A (eds) *Functional metagenomics: tools and applications*. Springer, Cham, pp 95–117.
- Youssef NH, Dencane KE, Nagle DP, 2004. Comparison of methods to detect biosurfactant production by diverse microorganisms. *J Microbiol Methods*. 56: 339–347.
- Yulia E, Istifadah N, Widiyanti F, Utami HS, 2017. Antagonisme *Trichoderma* spp. Terhadap Jamur *Rigidoporus lignosus* (Klotzsch) Imazeki dan Penekanan Penyakit Jamur Akar Putih pada Tanaman Karet. *Jurnal Agrikultura*. 28: 47-55.
- Zakharova LY, Pashirova TN, Doktorovova S, Fernandes AR, Sanchez-Lopez E, Silva AM, Souto SB, Souto EB, 2019. Cationic surfactants: Self-assembly, structure-activity correlation and their biological applications. *Int J Mol Sci*. 20.
- Zivkovic S, Stojanovic S, Ivanovic Z, Gavrilovic V, Popovic T, Balaz J, 2010. Screening of Antagonistic Activity of Microorganism Against *Colletotrichum acutatum* and *Colletotrichum gloeosporioides*. *Archives Biological Science Belgare*. 62: 611-623.
- Zulfa I, 2016. Isolasi dan Uji Aktivitas Antibakteri Kapang Endofit Akar Tanaman Kayu Jawa (*Lannea coromandelica* (Houtt.) Merr.). [Skripsi]. Jakarta: UIN Syarif Hidayatullah Jakarta, Program Sarjana.