

DAFTAR PUSTAKA

1. Ghosh SK, Pal S, Ray S. Study of microbes having potentiality for biodegradation of plastics. *Environ Sci Pollut Res*. 2013;
2. Singh J, Gupta KC. Screening and Identification of Low density Polyethylene (LDPE) Degrading Soil Fungi Isolated from Polythene Polluted Sites around Gwalior city (M.P.). *Int J Curr Microbiol Appl Sci*. 2014;3(6):443–8.
3. Veethahavya KS, Rajath BS, Noobia S, B MK. Biodegradation of Low Density Polyethylene in Aqueous Media. *Procedia Environ Sci*. 2016;35:709–13.
4. Permatadewi A, Djamaan A. Kajian Biodegradasi Filem Plastik Campuran Polistiren dengan Poli(3hidroksibutirat-ko-3hidroksivalerat) dalam Tanah Secara In-vitro. *J Farm Andalas*. 2013;1(1):30–6.
5. Krueger MC, Harms H, Schlosser D. Prospects for microbiological solutions to environmental pollution with plastics. *Appl Microbiol Biotechnol*. 2015;99:8857–74.
6. Yoshida S, Hiraga K, Takehana T, Taniguchi I, Yamaji H, Maeda Y, et al. A bacterium that degrades and assimilates poly(ethylene terephthalate). *2016;351(6278):1–5*.
7. Octaviani M, Zaini E, Djamaan A, Pembahasan H. Kajian Biodegradasi Filem Plastik Campuran Polistiren dengan Poli (3-Hidroksibutirat) Dalam Tanah. *J Farm Andalas*. 2013;1(1):42–7.
8. Bhardwaj H, Gupta R, Tiwari A. Microbial Population Associated with Plastic Degradation. *2012;1(5):1–4*.
9. Chee J, Yoga S, Lau N, Ling S, Abed RMM. Bacterially produced polyhydroxyalkanoate (PHA): converting renewable resources into bioplastic. *Curr Res Technol Educ Top Appl Microbiol Microb Biotechnol*. 2010;
10. Agustien A, Jannah M, Djamaan A. Screening Polyethylene Synthetic Plastic Degrading-Bacteria from Soil. *Der Pharm Lett*. 2016;8(7):183–7.
11. Hadad D, Geresh S, Sivan A. Biodegradation of polyethylene by the thermophilic bacterium *Brevibacillus borstelensis*. *J Appl Microbiol*. 2005;98:1093–100.
12. Ruslan R, Permatadewi A, Djamaan A. Characterization of *Bacillus* sp. ITP 10.2.1 as degrading-bacteria of polyethylene terephthalate (PET) synthetic

- plastic. *Int Res J Pharm*. 2018;9(11):56–9.
13. Ruslan R, Permatadewi A, Djama. Isolation and characterization of polystyrene-degrading bacteria *Bacillus* sp. ITP 10.1.1 from soil sample of Jayawijaya mountains, Papua, Indonesia. *Int Res J Pharm*. 2018;9(10):85–9.
 14. Iqbal M. *Skrining Bakteri Pendegradasi Plastik Polietilen dan Polistiren dari Tanah Gunung, Jayawijaya*. [Skripsi]. Padang: Universitas Andalas; 2018.
 15. Alshehrei F. Biodegradation of Synthetic and Natural Plastic by Microorganisms. *J Appl Environ Microbiol*. 2017;5(1):8–19.
 16. Krueger MC, Seiwert B, Prager A, Zhang S, Abel B, Harms H, et al. Degradation of polystyrene and selected analogues by biological Fenton chemistry approaches: Opportunities and limitations. *Chemosphere*. 2017;173:520–8.
 17. Shah AA, Hasan F, Hameed A, Ahmed S. Biological Degradation of Plastics: A Comprehensive Review. *Biotechnol Adv*. 2008;26:246–65.
 18. Gnanavel G, Thirumarimurugan M, Valli MJ. Current Scenario of Biodegradation of Plastics – Review. *Aust J Basic Appl Sci*. 2015;9(23):408–17.
 19. Webb HK, Arnott J, Crawford RJ, Ivanova EP. Plastic Degradation and Its Environmental Implications with Special Reference to Poly(ethylene terephthalate). *Polymers (Basel)*. 2012;5:1–18.
 20. Sinha V, Patel MR, Patel J V. Pet Waste Management by Chemical Recycling : A Review. *J Polym Environ*. 2010;
 21. Marten E, Muller R, Deckwer W. Studies on the enzymatic hydrolysis of polyesters II. Aliphatic-aromatic copolyesters. *Polym Degrad Stab* 88; 2005. 371-381 p.
 22. Bombelli P, Howe CJ, Bertocchini F. Polyethylene bio-degradation by caterpillars of the wax moth *Galleria mellonella*. *Curr Biol*. 2017;27(8):292–3.
 23. Mor R, Sivan A. Biofilm formation and partial biodegradation of polystyrene by the actinomycete *Rhodococcus ruber*: Biodegradation of polystyrene. *Biodegradation*. 2008;19:851–8.
 24. Krueger MC, Hofmann U, Moeder M, Schlosser D. Potential of Wood-Rotting Fungi to Attack Polystyrene Sulfonate and Its Depolymerisation by *Gloeophyllum trabeum* via Hydroquinone-Driven Fenton Chemistry. *PLoS One*. 2015;10(7):1–17.

25. Brady N, Weil R. The Nature and properties of Soils. 14th ed. Noida, India: Dorling Kindersley India Pvt.Ltd; 2012.
26. Van der heijden MGA, Bardgett RD, Van straalen NM. The unseen majority: soil microbes as drivers of plant diversity and productivity in terrestrial ecosystems. *Ecol Lett.* 2008;296–310.
27. Nannipieri P, Ascher J, Ceccherini M, Landi L. Microbial diversity and soil functions. *Eur J Soil Sci.* 2003;54:655–70.
28. Cheng W, Kuzyakov Y. Root Effects on Soil Organic Matter Decomposition. 2005;(48):119–44.
29. Sivan A. Biofilm development of the Polyethylene-degrading bacterium *Rhodococcus ruber*. *Appl Microb Physiol.* 2006;72:346–52.
30. Zheng Y, Yanful EK, Bassi AS. A Review of Plastic Waste Biodegradation. *Crit Rev Biotechnol.* 2005;25:243–50.
31. Saminathan P, Sripriya A, Nalini K, Sivakumar T, Thangapandian V. Biodegradation of Plastics by *Pseudomonas putida* isolated from Garden Soil Samples. *J Adv Bot Zool.* 2014;1(3):1–4.
32. Mahdi MS, Ameen RS, Ibrahim HK. Study on Degradation of Nylon 6 by thermophilic bacteria *Anoxybacillus rupiensis* Ir3 (JQ912241). *Int J Adv Res Biol Sci.* 2016;3(9):200–9.
33. Yang J, Yang Y, Wu W, Zhao J. Evidence of Polyethylene Biodegradation by Bacterial Strains from the Guts of Plastic-Eating Waxworms. *Environ Sci Technol.* 2014;48:13776–84.
34. Jamil SUU, Zada S. Biodegradation of Polyethylene By Bacterial Strains Isolated From Kashmir Cave, Buner, Pakistan. *J Cave Karst Stud.* 2017;79:73–80.
35. Gnanavel G, Mohana VP, Valli J, Kannadasan T. Degradation of Plastics Using Microorganisms. *Int J Pharm Chem Sci.* 2012;1(3):1040–3.
36. Priyanka N, Archana T. Biodegradability of Polythene and Plastic By The Help of Microorganism : A Way for Brighter Future. *J Environ Anal Toxicol.* 2011;1(4):1–4.
37. Das MP, Kumar S. An approach to low-density polyethylene biodegradation by *Bacillus amyloliquefaciens*. 2015;5:81–6.
38. Rajandas H, Parimannan S, Sathasivam K, Ravichandran M, Yin LS. A novel

- FTIR-ATR spectroscopy based technique for the estimation of low-density polyethylene biodegradation. *Polym Test*. 2012;31:1094–9.
39. Chatterjee S, Roy B, Roy D, Banerjee R. Enzyme-mediated biodegradation of heat treated commercial Polyethylene by Staphylococcal species. *Polym Degrad Stab*. 2010;95:195–200.
 40. Sen SK, Raut S. Microbial degradation of low density polyethylene (LDPE): A review. *J Environ Chem Eng*. 2015;3:462–73.
 41. Nowak B, Bratkowicz-Drozd M, Rymarz G. Microorganisms participating in the biodegradation of modified polyethylene films in different soils under laboratory conditions. *Int Biodeterior Biodegradation*. 2011;65:757–67.
 42. Koutny M, Amato P, Muchova M, Ruzicka J, Delort A. Soil bacterial strains able to grow on the surface of oxidized polyethylene film containing prooxidant additives. *Int Biodeterior Biodegradation*. 2009;63:354–7.
 43. Yang Y, Yang J, Wu W, Zhao J, Song Y, Gao L, et al. Biodegradation and Mineralization of Polystyrene by Plastic-Eating Mealworms: Part 2. Role of Gut Microorganisms. *Environ Sci Technol*. 2015;49:12087–93.
 44. Tan G-YA, Ge L, Tan SN. Bioconversion of Styrene to Poly (hydroxyalkanoate) (PHA) by the New Bacterial Strain *Pseudomonas putida* NBUS12. *Microbes Environ*. 2015;30(1):76–85.
 45. Ishigaki T, Sugano W, Nakanishi A. The degradability of biodegradable plastics in aerobic and anaerobic waste landfill model reactors. *Chemosphere*. 2004;54:225–33.
 46. Lucas N, Bienaime C, Belloy C, Queneudec M, Silvestre F, Nava-saucedo J. Polymer biodegradation: Mechanisms and estimation techniques. *Chemosphere*. 2008;73:429–42.
 47. Sangale MK, Shahnawaz M, Ade AB. A Review on Biodegradation of polythene: The Microbial Approach. *Bioremediation Biodegrad*. 2012;3(10):1–9.
 48. Djamaan A, M.N. A, M.I.A. M. Biodegradation of microbial polyesters P(3HB) and P(3HB-co-3HV) under the tropical climate environment. *Polym Degrad Stab*. 2003;80(3):513–8.
 49. Cappuccino JG, N S. *Microbiology: A Laboratory Manual*. 10th ed. New York: Pearson; 2014.
 50. Jumaah OS. Screening Of Plastic Degrading Bacteria from Dumped Soil Area.

- J Environ Sci Toxicol Food Technol. 2017;11(5):93–8.
51. Cowan ST. Manual for the Identification of Medical Bacteria. kedua. Cambridge University Press; 1974.
 52. Hemraj, V., Diksha, S., Avneet G. A review on commonly used biochemical test for bacteria. *Innovare J Life Sci.* 2013;1(1):1–7.
 53. Pramila R, Ramesh KV. Biodegradation of low density polyethylene (LDPE) by fungi isolated from marine water – a SEM analysis. *African J Microbiol Res.* 2011;5(28):5013–8.
 54. Kyaw BM, Champakalakshmi R, Sakharkar MK, Lim C. Biodegradation of Low Density Polythene (LDPE) by Pseudomonas Species. *Indian J Microbiol.* 2012;52(3):411–9.
 55. Dalynn Biologicals. Mc Farland standard. In: Catalogue No TM50-TM60. 2014. p. 2.
 56. Djamaan A, Permatadewi A. Metode Produksi Biopolimer dari Minyak Kelapa Sawit, Asam Oleat, dan Glukosa. Padang: Andalas University press; 2014.
 57. Kshikhundo R, Itumhelo S. Bacterial species identification. 2016;3:26–38.
 58. Harti AS. Mikrobiologi Kesehatan. Yogyakarta: Penerbit Andi; 2015.
 59. Wise G, Pattern D, Typhoid OF, Bacteria C, Serovars S, Region M. Age and Gender Wise Distribution Pattern Of Typhoid Causing Bacteria Salmonella Serovars In Mahakaushal Region. *World J Pharm Res.* 2014;3(4):1183–203.
 60. I.S. S. Probiotik Susu fermentasi dan Kesehatan. Jakarta: Tri Cipta Karya; 2004.
 61. Kavitha. R, Anju k., Mohanan and Bhuvanewari V. Biosynthesis Of Copolymer Poly (3-Hydroxybutyrate-Co-3-Hydroxyvalerate) From Palm Oil and N-Pentanol In a 10L Bioreactor. *Int J Plant, Anim Environ Sci.* 2015;(October).
 62. Abrusci C, Pablos JL, Corrales T, López-marín J, Marín I, Catalina F. Biodegradation of photo-degraded mulching films based on polyethylenes and stearates of calcium and iron as pro-oxidant additives. *Int Biodeterior Biodegradation.* 2011;65.
 63. Zufahair, Lestari P, Ningsih DR, Widyaningsih S. Biodegradasi Polietilena Menggunakan Bakteri dari TPA (Tempat Pembuangan Akhir) Gunung Tugel Kabupaten Banyumas. :98–106.

64. Majid MIA, Ismail J, Few LL, Tan CF. The degradation kinetics of poly (3-hydroxybutyrate) under non-aqueous and aqueous conditions. 2002;38:837–9.
65. Sivan A. New perspectives in plastic biodegradation. *Curr Opin Biotechnol.* 2011;22:422–6.
66. Gilan I, Hadar Y, Sivan A. Colonization , biofilm formation and biodegradation of polyethylene by a strain of *Rhodococcus ruber*. *Appl Microb Cell Physiol.* 2004;65:97–104.
67. Atiq N, Ahmed S, Ali MI, Andleeb S, Ahmad B. Isolation and identification of polystyrene biodegrading bacteria from soil. 2010;4(November 2006):1537–41.
68. Gu J, Ford TE. *LJL Microbial Degradation of Materials : General Processes.* 2011;(April).
69. Mooney A, Ward PG, Connor KEO. Microbial degradation of styrene : biochemistry , molecular genetics, and perspectives for biotechnological applications. 2006;1–10.
70. Artham T, Doble M. Biodegradation of Aliphatic and Aromatic Polycarbonates. 2010;14–24.

