

ACKNOWLEDGMENT

This research financially supported by Universitas Padjadjaran Grants from the Ministry of Research, Technology and Higher Education, Indonesia.

REFERENCES

- [1] Seprianto, "Isolation and screening of cellulolytic bacteria from various types of soil as a producer of cellulase enzymes," IJOBB, vol. 2, no. 3, 2017.
- [2] D. N. Sari, H. Setiawan, and Abun, "The Effect of Long Fermentation by *Bacillus Licheniformis* Continued by *Saccharomyces Cerevisiae* On Shrimp Waste On Content of Protein and Glucose Product," 2016.
- [3] M. Herman, Pecan Sunan (*Reutelis candlenut sunan (Blanco) airy Shaw*) Vegetable Oil-Producing Plants and Land Conservation. Niaga Swadaya, 2013.
- [4] A. Nadia, Fauziah, and E. Mayori, "Potential of Lignocellulosic Oil Palm Waste in South Kalimantan for Bioethanol and Xylitol Production," J. Sci. Educ. Innov., vol. 8, pp. 41–51, 2017.
- [5] Erwinsyah, A. Afriani, and T. Kardiansyah, "Palm Oil Bunch and Potential Opportunities as Raw Material for Pulp and Paper," vol. 5, pp. 79–88, 2017.
- [6] B. D. Argo and R. Yulianingsih, "Utilization of Cellulase Enzymes from *Trichoderma Reesei* and *Aspergillus Niger* as Catalysts for Rice Straw Enzymatic Hydrolysis with Microwave Pretreatment," J. Bioproses Komod. Trop., vol. 1(1), pp. 36–43, 2013.
- [7] M. Rahman and T. A. Susanti, "Test of Cellulolytic Bacteria Cellulase Activity Derived from Oil Palm Empty Fruit Bunches," Politekniki Perkebunan Negeri Samarinda, 2016.
- [8] A. K. J and O. Omar, "Isolation of Cellulolytic Fungi from Wings - Kinabalu Sabah," J. Biodivers. Bio-Century, pp. 1–6, 1988.
- [9] E. Coast, V. Jennifer, and G. Thiruneelakandan, Enzymatic Activity of Marine *Lactobacillus* Species from South. 2015.
- [10] J. Perez, "Biodegradation and biological treatments of cellulose , hemicellulose and lignin : an overview," Int. J. Microbiol., pp. 53–63, 2002.
- [11] Darnoko, Potential Use of Palm Oil Lignocellulose Waste Through Bioconversion. Jakarta: Agro Media Pustaka, 1992.
- [12] B.C Behera, B.K. Sethi, R.R. Mishra, S.K. Dutta and H.N. Thatoi, " Microbial cellulases-Diversity and biotechnology with reference to mangrove environment: A review", J.Gen. Eng and Biotech, vol. 15, pp 197-210, 2017.
- [13] MaríaCiudad, MuleroVirginiaFernández, R. CruzMatallana, and GonzálezPatriciaMorales., "Dietary fiber sources and human benefits: The case study of cereal and pseudocereals," Adv. Food Nutr. Res., vol. 90, pp. 83–134, 2019.
- [14] F. J. Mc. Donald. RG, Pulp and Paper Manufacture. Bandar Lampung, 1969.
- [15] J. Casey, "Pulp and Paper Chemistry and Chemical Technology," vol. 1, 1980.
- [16] A. Taleb, "Nutritional and Environmental Factors Affecting Cellulase Production by Two Strains of Cellulolytic Bacilli," Aust. J. Basic Appl. Sci., vol. 3, 2009.
- [17] Subagiyo, S., Margino., Triyanto, T., Ari , S., "Effect of pH, Temperature and Salinity in Growth and Organic Acid Production of Lactid Acid Bacteria Isolated from Penaieid shrimp Intestine", Ilmu Kelautan: Indonesian Journal of Marine Sciences, vol 20(4), pp. 187-194, 2017.
- [18] Mulyasari, M., Irma, M., MTD Sunarno, "Isolation, Selection and Identification of Cellulolytic Bacteria from Seaweed", J. Riset Akuakultur, vol. 10, 2015.
- [19] Y. Kim, H. Jung, and J. Pan, "Bacterial Cell Surface Display of an Enzyme Library for Selective Screening of Improved Cellulase Variants," J. Appl. Environ. Microbiol., vol. 66, pp. 788–793, 2000.
- [20] L. Hankin and S.L. Anagnostakis, "The Use of Solid Media for Detection of Enzyme Production by Fungi," J. Mycologia., vol. 67, no. 3, pp. 597-607, 1975.
- [21] M. Peleg and M. G. Corradini, "Microbial Growth Curves : What the Models Tell Us and What They Cannot," Crit. Rev. Food Sci. aand Nutr., vol. 51, no. August 2014, pp. 917–945, 2011.
- [22] Subagiyo, S., Margino, S., Triyanto, T., & Ari S, "Effects of pH, Temperature and Salinity in Growth and Organic Acid Production of Lactid Acid Bacteria Isolated from Penaeid Shrimp Intestine," Indon. J. of Marine Sci, vol. 20(4), pp. 147, 2017.
- [23] V. Jennifer, E. Coast, and G. Thiruneelakandan, "Enzymatic Activity of Marine *Lactobacillus* Species from South. Jakarta, 2015.
- [24] Sastrohamidjojo, Organic Chemistry, Stereochemistry, Fat, and Protein. Yogyakarta, Indonesia: Gadjah Mada University Press, 2005.
- [25] M. I. Jay, "Test of Cellulase Enzyme Activity in Molds from the Pari Islands Waters of the Thousand Islands," Bogor Agric. Inst., 2014.
- [26] Raifah M., Maswati B,"Identification Termophilic Bacteria from Lejja Hot Spring, Kab. Soppeng" vol.4, pp 31-42, 2016.
- [27] S.P. Gautam and P.S. Bundela " Cellulase Production by *Pseudomonas* sp. Isolated from Municipal solid waste compost," Int. J. of Academic Research, vol. 2 no. 6, 2010.
- [28] Maratun S.A., Baharuddin, M., "Production and cellulose enzyme activity from *Bacillus subtilis*", JOM FMIPA UIN Alaudin, pp. 78-90, 2015.