

## DAFTAR PUSTAKA

- Aftab, S., Ahmed, S., Saeed, S. & Rasool, S.A. (2006). Screening, Isolation and Characterization of Alkaline Protease Producing Bacteria from Soil. *Pakistan Journal Biological Science*, 9, 2122-2126.
- Aini, F.N., Sukamto, S., Wahyuni, D., Suhesti, R.G. & Ayyunin, Q. (2013). Penghambatan Pertumbuhan *Colletotrichum Gloeosporioides*, *Trichoderma harzianum*, *Trichoderma koningii*, *Bacillus subtilis* dan *Pseudomonas fluorescens*. *Jurnal Pelita Perkebunan*, 29(1), 44-52.
- Alexander, M. (1994). *Biodegradation and Bioremediation*. Academic Press. New York.
- Baehaki, A., Rinto & Budiman, A. (2011). Isolasi dan Karakterisasi Protease dari Bakteri Tanah Indralaya, Sumatra Selatan. *Jurnal Teknologi dan Industri Pangan*, 22(1).
- Baranyi, J. (2008). Single Cell and Population Lag Times As A Function of Cell Age. *Applied and Environmental Microbiology*, 74, 2534-2536.
- Bordbar, S., Ebrahimpour, A., Hamid, A.A. & Saari, N. (2013). The Improvement of The Endogenous Antioxidant Property of Stone Fish (*Actynoyga Lecanora*) Tissue Using Enzymatic Proteolysis. *Biology and Medical Research International*, 9(1), 15-18.
- Brock, T.D., Madigan, M.T., Martinko, J.M. & Parker, J. (1994). *Biology of Microorganism*. 7<sup>th</sup> Ed. Prentice Hall International. New Jersey.
- Cartwright, P. (2009). Probiotic News: *Bacillus subtilis* – Identification and Safety. *Protexin Health Care*, 2.
- Chalamaiah, M., Jyothirmayi, T., Diwan, P.W. & Kumar, B.D. (2015). Antioxidant Activity and Functional Properties of Enzymatic Protein Hydrolysates from Common Carp (*Cyprinus Carpio*) Roe (Egg). *Journal Food Science and Technology*, 52(9), 5817-5825.
- Chen, H.M., Muramoto, K., Yamauchi, F., & Nokihara, K. (1996). Antioxidant Activity of Design Peptides Based on The Antioxidative Peptide Isolated from Digests of A Soybean Protein. *Journal of Agricultural and Food Chemistry*, 44, 2619-23.
- Chu, W.H. (2006). Optimization of Extraceluller Alkaline Protease Production from Species of *Bacillus*. *Journal of Industrial Microbiology and Biotechnology*, 34, 241-245.
- Correa, A.P., Darorit, D.J., Coelho, J., Meira, S.M., Lopes, F.C., Segalin, J., Risso, P.H. & Brandelli, A. (2011). Antioxidant, Antihypertensive and Antimicrobial Properties of Ovine Caseinate Hydolyzed with Microbial Protease. *Journal of The Science of Food and Agriculture*, 91, 2247-2254.

- Costa, W.K.A., Souza, E.L., Beltrao-Filho, E.M., Vasconcelos, G.K.V, Santi-Gadelha, T., Gadelha, C.A.A., Franco, O.L, Queoroga, R.C.R.E. & Magnani, M. (2014). Comprative Protein Composition Analysis of Goat Milk Produced by The Alpine and Saanen Breeds in Northeastern Brazil and Related Antibacterial Activities. *Journal Public Library of Science*, 9(3), 9361.
- Dehpour, A.A., Ebrahimzadeh, M.A., Fazel, N.S. & Mohammad, N.S. (2009). Antioxidant Activity of Methanol Extract of *Ferula Assafoetida* and its Essential Oil Composition. *Grasas Aceites*, 60(4), 405-412.
- Dewi, N.M. (2016). Peptida Antioksidatif dari Hidrolisat Protein Ikan Kayu. *Skripsi*. IPB. Bogor.
- Fardiaz, S. (1992). *Mikrobiologi Pengolahan Pangan*. Departemen Pendidikan dan Kebudayaan Direktorat Jenderal Pendidikan Tinggi Pusat Antar Universitas Pangan dan Gizi Institut Pertanian Bogor. Bogor, 3-23.
- Fuad, A.M., Rahmawati, R. & Mubarik, N.R. (2004). Produksi dan Karakterisasi Parsial Protease Alkali Termotabil *Bacillus thermoglucosidasius* AF-01. *Jurnal Mikrobiologi Indonesia*, 9(1), 29-35.
- Geethanjali, S. & Subash, A. (2011). Optimization of Protease Production by *Bacillus subtilis* Isolated from Mid Gut of Fresh Water Fish *Labeo rohita*. *World Journal of Fish and Marine Science*, 3(1), 88-95.
- Gonzalez, R.N., Badillo, J.A., Aranda, J.S. & Oliver, S. (2011). Production of Plant Proteases in Vivo and in Vitro a Review. *Journal Biotechnology Advance*, 29, 983-996.
- Harpreet, K. & Kumar, A. (2014). Bioremediation of Hexavalent Chromium in Wastewater Effluent by *Pseudomonas Putida*. *Journal of Research in Earth and Environmental Sciences*, 1(4), 18-24.
- Haslaniza, H., Maskat, M.Y., Wan Aida, W.M. & Mamot, S. (2010). The Effect of Enzyme Concentration, Temperature, and Incubation Time on Nitrogen Content and Degree of Hydrolysis of Protein Precipitate from Cockle (*Ananda Granosa*) Meat Wash Water. *Journal International Food Research*, 17, 147-152.
- Holt, J. G., Krieg, N. R., Sneath, J. T., & Williams, S. T. (2004). *Bergey's Manual of Determinative Bacteriology Edisi ke 9*. Lippincott Williams & Wilkins. Philadelphia.
- Hussein, Z. M., Abedali, A. H., & Ahmead, A. S. (2019). Improvement Properties of Self-Healing Concrete by Using Bacteria. *IOP Conference Series: Materials Science and Engineering*, 584, 1-10.
- Jandal, J.M. (1996). Comparative Aspects of Goat and Sheep Milk. *Small Ruminant Research*, 22, 177-185.

- Jia, J., Zhou, Y., Chen, A., Li, Y., & Zhenh, G. (2010). Enzymatic Hidrollysis of Allaska Pollack (*Theragra chalcogramma*) Skin and Antioxidant Activity of The Result Hydrolysate. *Journal of The Science of Food and Agriculture*, 90, 635-640.
- Koleva, Van Beek T.A., Linsen, P.H., Groot, A. & Evstatieva L.N. (2002). Screening of Plant Extracts for Antioxidant Activity: A Comparative Study on Three Testing Methods. *Phytochemical Analysis*, 13, 8-17.
- Korhonen, H. (2009). Milk-derived Bioactive Peptides: from Science to Applications. *Journal of Functional Food*, 177-187.
- Kosim, M. S., & Putra, R. (2010). Pengaruh Suhu pada Protease dari *Bacillus subtilis*. *Skripsi*. Institut Teknologi Surabaya. Surabaya.
- Kusumaningtyas, E. (2013). Peran Peptida Susu Sebagai Antimikroba untuk Meningkatkan Kesehatan. *Wartozoa*, 23(2), 63-75.
- Kusumaningtyas, E., Widiastuti, R., Kusumaningrum, H.D. & Suhartono, M.T. (2015). Aktivitas Antibakteri dan Antioksidan Hidrolisat hasil Hidrolisis Protein Susu Kambing dengan Ekstrak Kasar Bromelin. *Jurnal Teknologi dan Industri Pangan*, 26(2), 179-188.
- Lehninger, A.L. (2008). *Dasar-dasar Biokimia*. Erlangga. Jakarta.
- Lestari, S.D. (2015). Protein dan Peptida Susu Kambing serta Potensinya sebagai Antibakteri. *Skripsi*. IPB. Bogor.
- Lestari, S.D., Romadhoni, A.R., & Baehaki A., (2020). Hidrolisis Protein Ikan Patin menggunakan Enzim Papain dan Aktivitas Antioksidan Hidrolisatnya. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 18, 230-239.
- Lestari, P., & Suyata. (2020). Aktivitas Antioksidan Protein Hidrolisat dari Kasein Susu Kambing Etawa Hasil Hidrolisis Bromelin dari Daun Nanas Madu. *Jurnal Gipas*, 4(1), 6-9.
- Mardiah, E. (2011). Mekanisme Inhibisi Enzim Polifenol Oksidase pada Sari Buah Markisa dengan Sistein dan Asam Askorbat. *Jurnal Riset Kimia*, 4(2), 32-37.
- Martoyo, Y.P., Haryadi, D.R., Rahayu, P.W. (2014). Kajian Standar Cemaran Mikroba Dalam Pangan di Indonesia. *Jurnal standarisasi*, 16(2), 113-124.
- Molyneux, P. (2004). The Use of The Stable Free Radical Diphenylpicrylhydrazil (DPPH) for Estimating Antioxidant Activity. *Journal Science and Technology*, 26(2), 211-219.
- Moon, S.H. & Parulekar, S.J. (1993). Some Observation on Protease Producing in Continous Suspension Cultures of *Bacillus firmus*. *Journal of Biotechnology*, 41, 43-54.

- Murray, R.K., Granner, D.K. & Rodwell, V.W. (2009). *Biokimia Harper, Buku Kedokteran*, EGC. Jakarta.
- Nagasawa, T., Yonekura, T., Nishizawa, N. & Kitts, D.D. (2001). In Vitro and In Vivo Inhibition of Muscle Lipid and Protein Oxidation By Carnosine. *Molecular and Cellular Biochemistry*, 225, 29-34.
- Najafi, M.F. & Deobagkar, D. (2005). Potential Application of Protease Isolated from *Pseudomonas aeruginosa* PD100. *Electronic Journal of Biotechnology*, 8(2), 203.
- Nisa, C., Agungpriyono, S. & Maheswari, R.R.A. (2007). Uji Aktivitas Ekstrak Mukosa Abomasum Domba Lokal dalam Mengkoagulasikan Susu. *Jurnal Medik Veteriner*, (2), 58-63.
- Pakpahan, R. (2009). Isolasi Bakteri dan Uji Aktivitas Protease Termofilik dari Sumber Air Panas Sipoholon Tapanuli Utara Sumatra Utara. *Thesis*. Universitas Sumatra Utara. Medan.
- Palsaniya, P., Rinki, M., Beejawat, N., Sethi, S. & Gupta, B.L. (2012). Optimization of Alkaline Protease Production from Bacteria Isolated from Soil. *Journal of Microbiol and Biotechnology Research*, 2(6), 695-701.
- Park, Y. W., Juarez, M., Ramos, M. & Haenlein, G. F. W. (2007). Physico-chemical Characteristics of Goat and Sheep Milk. *Small Ruminant Research*, 68(68), 88-113.
- Palmer, T. (1981). *Understanding Enzymes*. Ellis Horwood. England.
- Pant, G., Anil, P., Pavani, J.V.P., Sayantan, B., Deviram, A.K., Mitali, P. & Ravi, G.P. (2015). Production , Optimization, and Partial Purification of Protease from *Bacillus subtilis*. *Journal of Taibah University for Science*, 9, 50-55.
- Pelczar, M. J. & Chan, E.C.S. (2008). *Dasar-dasar Mikrobiologi*. UI Press. Jakarta.
- Poedjiadi, A. & Supriyanti, F.M. (2006). *Dasar-Dasar Biokimia*. UI Press. Jakarta.
- Prasetyo, N.D.,& Nur, H.A. (2016). Optimasi Produksi Enzim Protease dari Candida G3.2. *Skripsi*. Jurusan Biologi Fakultas MIPA Institusi Teknologi Sepuluh November.
- Purwanto, & Marianti, M. G. (2014). Perbandingan Analisa Kadar Protein Terlarut dengan Berbagai Metode Spektroskopi UV-Visible. *Jurnal Ilmiah Sains dan Teknologi*, 7(2), 64-71.
- Puspitasari, F.D., Shovitri, M. & Kuswyasari, N.D. (2012). Isolasi dan Karakterisasi Bakteri Aerob Proteolitik dari Tangki Septik. *Jurnal Sains dan Seni ITS*, 1(1).
- Radji, M. (2011). *Buku Ajar Mikrobiologi Panduan Mahasiswa Farmasi dan Kedokteran*. EGC. Jakarta.

- Rajapakse, N., Mendis, E., Jung, W.K., Je, J.Y. & Kim, S.K. (2005). Purification of A Radical Scavenging Peptide From Fermented Mussel Sauce and its Antioxidant Properties. *Journal Food Research International*, 38, 175-82.
- Rao, M.B, Tanksale, A.M., Ghate, M.S. & Deshpande, V.V. (1998). Molecular and Biotechnological Aspects of Microbial Proteases. *Microbiology and Molecular Biology Reviews*, 62, 597-635.
- Rosartio, R., Suranindyah, Y., Bintara, S. & Ismaya. (2015). Produksi dan Komposisi Susu Kambing Peranakan Etawa di Dataran Tinggi dan Dataran Rendah Daerah Istimewa Yogyakarta. *Buletin Peternakan*, 39(3), 180-188.
- Rosmania, & Fitri, Y. (2020). Perhitungan Jumlah Bakteri di Laboratorium Mikrobiologi Menggunakan Pengembangan Metode Spektrofotometri. *Jurnal Penelitian Sains*, 22(2), 76-86.
- Saito, K., Jin, D.H., Ogawa, T., Muramoto, K., Hatakeyama, E. & Yasuhara, T. (2003). Antioxidative Properties of Tripeptide Libraries Prepared By The Combinatorial Chemistry. *Journal Agricultural and Food Chemistry*, 95, 243-9.
- Schaechter, M. & Ingraham F.C. (2006). *Journal Microbes and Infection*. ASM Press. Washington DC.
- Scharer, R. & Godoy, H.T. (2009). Antioxidative Properties. *Thesis*. Vancouver (CA): Faculty of Graduate Studies (Food Science). University of British Columbia. Columbia.
- Setiawan, T. & Tanius, A. (2005). *Beternak Kambing Perah Peranakan Etawa*. Penebar Swadaya. Bogor.
- Sholihati, A. M., Baharuddin, M., & Santi, S. (2015). Produksi dan Uji Aktivitas Enzim Selulase dari Bakteri *Bacillus subtilis*, 3(2), 78-85.
- Smith, J.E. (1990). *Prinsip Bioteknologi*. Gramedia. Jakarta.
- Soeka, Y.S. & Sulistiani. (2014). Karakterisasi Protease *Bacillus subtilis* A1 Inacc B398 yang Diisolasi dari Terasi Samarinda. *Berita Biologi*, 13(2), 203-212.
- Sreekumar, G. & Soundrajan, K. (2010). Temperature Adaptation Study on Probiotic *Bacillus subtilis* SK09 Based on its Extracellular Proteins. *Advance Journal of Food Science and Technology*, 2(5), 246-249.
- Sudarmanto, A. (2008). *Penetapan Kadar Protein Metode Lowry*. Universitas Gajah Mada. Yogyakarta.
- Sugiyono, A.J., Lintang, R. A. & Sabe. (2007). Penapisan dan karakterisasi Protease Bakteri Termofilik Asal Mata Air Laut Panas Poso Sulawesi Tengah. *Skripsi*. Fakultas Perikanan dan Ilmu Kelautan Universitas Sam Ratulangi. Manado.

- Suhartono, M.T. (1989). *Enzim dan Bioteknologi*. Departemen Pendidikan dan Kebudayaan Direktorat Jenderal Pendidikan Tinggi Antar Universitas Bioteknologi Institut Pertanian Bogor. Bogor.
- Shukla, O.P., Rai, U.N., Singh, N.K, Smita, D. & Baghel, V.S. (2007). Isolation and Characterization of Chromate Resistant Bacteria from Tannery Effluent. *Journal of Environmental Biology*, 28(2), 399-403
- Sutton, S. (2011). Determination of Inoculum for Microbiological Testing. *Summer*, 15(3), 49-53.
- Susanti, E. (2003). Penentuan Aktivitas dan Jenis Protease dari *Bacillus sp.* BAC4<sup>1</sup>. *Sainsmat*, 1, 56-57.
- Thomas, D.B. (1984). *A Textbook Of Industrial Microbiology*. Sinaver Associates Sunderland. USA.
- Thu, N. T. A., Khue, N. T. M., Huy, N. D., Tien, N. Q. D., & Loc, N. H. (2020). Characterizations and Fibrinolytic Activity of Serine Protease from *Bacillus subtilis* C10. *Current Pharmaceutical Biotechnology*, 21(2), 110-116.
- Waluyo, L. (2011). *Mikrobiologi Umum*. UMM Press. Malang.
- Ward, O.P. (1983). *Proteinase in Microbial Enzyme and Biotechnology*. Applied Science Publisher. London.
- Wijayanti, D. (2014). Uji Kadar Protein dan Organoleptik Daging Sapi Rebus yang Dilunakkan dengan Sari Buah Nanas (*Ananas Comosus*). *Skripsi*. Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Surakarta. Surakarta.
- Wuryanti. (2004). Isolasi dan Penentuan Aktivasi Spesifik Enzim Bromelin dari Buah Nanas (*Ananas cosmosus L.*). *Jurnal Kimia Sains dan Aplikasi*, 7(3), 83-87.
- You, L., Zhao, M., Cui, C., Zhao, H. & Yang, B. (2009). Effect of Degree of Hydolysis on The Antioxidant Activity of Loach (*Misgurnus Angillicaudatus*) Protein Hydrolysis. *Innovation Food Science Emerging Technology*, 10, 235-240.
- Yuniati, R., Nugroho, T.T. & Puspita, F. (2015). Uji Aktivitas Enzim Protease dari Isolat *Bacillus sp.* Galur Lokal Riau. *Jurnal Online Mahasiswa FMIPA*, 1(2), 116-122.
- Zakaria, Y., Helmy, M.Y. & Safara, Y. (2011). Analisa Kualitas Susu Kambing Peranakan Etawa yang Disterilkan pada Suhu dan Waktu yang Berbeda. *Jurnal Agribisnis Peternakan*, 11(1), 29-31.
- Zimbro, M.J., Power, D.A., Miller, S.M., Wilson, G.E. & Johnson, J.A. (2009). *Difco and BBL Manual, Manual of Microbiological Culture Media. Second Edition*. Becton, Dickinson and Company. Maryland. America.

Zou, T.B., He, T.P., LI, H.B., Tang, H.W. & Xia, E.Q. (2016). The Structure-Activity Relationship of The Antioxidant Peptides from Natural Proteins. *Molecules*, 21, 1-14.

