

DAFTAR ACUAN

- Black, J.G. 1999. *Microbiology: Principles and explorations*. 4th ed. John Willey Sons, Inc., New York: xxiv + 786 hlm.
- Bradford, M.M. 1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Analytical biochemistry*. **72**: 248--254.
- Brzezinska, M.S. & W. Donderski. 2001. Occurrence and activity of the chitinolytic bacteria of *Aeromonas* genus. *Polish Journal of Environmental Studies*. **10**(1): 27--31.
- Campbell, N.A., J.B. Reece & L.G. Mitchell. 2002. *Biologi*. Terj. dari Biology. Oleh Lestari, R., E.I.M. Adil & N. Anita. 5th ed. Erlangga, Jakarta: xxi + 438 hlm.
- Chen, J.-P. & M.-S. Lee. 1994. Simultaneous production and partition of chitinase during growth of *Serratia marcescens* in an aqueous two-phase system. *Biotechnology Techniques*. **8**(11): 783--788.
- Chernin, L.S., M.K. Winson, J.M. Thompson, S. Haran, B.W. Bycroft, I. Chet, P. Williams & G.S.A.B. Stewart. 1998. Chitinolytic activity in *Chromobacterium violaceum*: Substrate analysis and regulation by quorum sensing. *Journal of Bacteriology*. **180**(17): 4435--4441.

- Chernin, L., Z. Ismailov, S. Haran & I. Chet. 1995. Chitinolytic *Enterobacter agglomerans* antagonistic to fungal plant pathogens. *Appl. Environ. Microbiol.* **61**(5): 1720--1726.
- Choi, Y.J., E.J. Kim, Z. Piao, Y.C. Yun & Y.C. Shin. 2004. Purification and characterization of chitosanase from *Bacillus* sp. Strain KCTC 0377BP and its application for production of chitosan oligosaccharides. *Appl. Environ. Microbiol.* **70**(8): 4522--4531.
- Colowick, S.P. & N.O. Kaplan. 1955. *Methods in enzymology*. Academic Press Inc., Publishers, New York: 146 hlm.
- Dinter, S., U. Bungler & E. Siefert. 2000. Enzymatic degradation of chitin by microorganisms. *Dalam: Peter, M.G. & R.A.A. Muzzarelli*. 2000. *Advances in chitin science*, Universitas Potsdam Druckhaus Schmergow, Germany: xiii + 650 hlm.
- Donderski, W. & M.S. Brzezinska. 2001. Occurrence of chitinolytic bacteria in water and bottom sediment of eutrophic lakes in Hawski Lake District. *Polish Journal of Environmental Studies.* **10**(5): 331--336.
- Donderski, W. & M. Trzebiatowska. 2000. Influence of physical and chemical factors on the activity of chitinases produced by planktonic bacteria isolated from Jeziorak lake. *Polish Journal of Environmental Studies.* **9**(2): 77--82.

- El-Mansi, E.M.T. 1999. Microbiology of industrial fermentation. *Dalam: El-mansi, E.M.T. & C.F.A. Bryce. 1999. Fermentation microbiology and biotechnology.* Taylor, London: xv + 308 hlm.
- Escott, G.M. & D.J. Adams. 1995. Chitinase activity in human serum and leukocytes. *infection and immunity.* **63**(12): 4770--4773.
- Fawzya, Y.N., N. Indriati & T.D. Suryaningrum. 2004. Pengaruh penambahan kitin pada medium produksi terhadap kitin deasetilase dari *Bacillus* K29-14. *Jurnal Penelitian Perikanan Indonesia.* **10**(3): 11--18.
- Gandjar, I., I.R. Koentjoro., W. Mangunwardoyo. & L. Soebagya. 1992. *Pedoman praktikum mikrobiologi dasar.* Jurusan Biologi FMIPA-UI, Depok: vii + 87 hlm.
- Gohel, V., A. Singh, M. Vimal, P. Ashwini & H.S. Chhatpar. 2006. Bioprospecting and antifungal potential of chitinolytic microorganisms. *African Journal of Biotechnology.* **5**(2): 54--72.
- Gohel, V., P. Vyas & H.S. Chhatpar. 2004. Activity staining method of chitinase on chitin agar plate through polyacrylamide gel electrophoresis. *African Journal of Biotechnology.* **4**(1): 87--90.
- Green, A.T., M.G. Healy & A. Healy. 2005. Production of chitinolytic by *Serratia marcescens* QMB1466 using various chitinous substrates. *Journal of Chemical Technology and Biotechnology.* **80**: 28--34.

- Guthrie, J.L., S. Khalif & A.J. Castle. 2005. An improved method for detection and quantification of chitinase activities. *Canadian Journal of Microbiology*. **51**(6): 491--495.
- Harini, N. & D. Septariningrum. 2006. Karakterisasi enzim *chitinase* hasil isolasi dari kultur murni bakteri *Vibrio alginolyticus*. *Semnaskam_UGM/Teknologi Hasil Perikanan*. 557--566.
- Hidayat, N., M.C. Padaga & S. Suhartini. 2006. *Mikrobiologi industri*. ANDI, Yogyakarta: xvi + 198 hlm.
- Hirano, S. 1997. Application of chitin and chitosan in the ecological and environmental fields. *Dalam: Goosen, M.F.A. 1997. Application of chitin and chitosan*. Tehnomic Publishing Compani, Inc., Lancaster: xi + 336 hlm.
- Huang, L., S.S. Miles & R.B. Lingham. 1999. Screening for activities. *Dalam: Demain, A.L. & J.E. Davies. 1999. Manual of industrial microbiology*, Washington: xv + 416 hlm.
- Hunter, I.S. 1999. Microbial synthesis of commercial product and strain improvement. *Dalam: El-mansi, E.M.T. & C.F.A. Bryce. 1999. Fermentation microbiology and biotechnology*. Taylor, London: xv + 308 hlm.
- Joklik, W.F. & D.T. Smith. 1968. *Microbiology*. 15th ed. Prentice-Hall, Inc., New York: xviii + 1120 hlm.
- Knorr, D. 1982. Functional properties of chitin and chitosan. *Journal of Food science*. **47**: 593--595.

- Koga, D., M. Mitsutomi, M. Kono, & M. Matsumiya. 1999. Biochemistry of chitinases. *Dalam*: Jolles, P. & R.A.A. Muzzarelli. 1999. *Chitin and chitinases*. Birkhauser Verlag, Basel : xi + 340 hlm.
- Lehninger, A.L. 1982. Dasar-dasar biokimia. Terj. dari *Principles of biochemistry*, Oleh Thenawidjaja, M. Penerbit Erlangga, Jakarta: xv + 369 hlm.
- Liaw, H.J. & R.A. Mah. 1992. Isolation and characterization of haloanaerobacter chitinovorans gen. nov., sp. nov., a halophilic, anaerobic, chitinolytic bacterium from a solar saltern. *Appl. Environ. Microbiol.* **58**(1): 260--266.
- Mejia-Saules, J.E., K.N. Waliszewski, M.A. Garcia & R. Cruz-camarillo. 2006. The use of crude shrimp shell powder for chitinase production by *Serratia marcescens* WF. *Food Technol. Biotechnol.* **44**(1): 95--100.
- Metcalf, A.C., M. Krsek, G.W. Gooday, J.I. Prosser & E.M.H. Wellington. 2002. Molecular analysis of a bacterial chitinolytic community in an upland pasture. *Appl. Environ. Microbiol.* **68**(10): 5042--5050.
- Moat, A.G., & J.W. Foster. 1995. *Microbial physiology*. 3th ed. Wiley-Liss, Inc., New York: xv + 580 hlm.
- Mousdale, D.M., J.C. Melville & M. Fischer. 1999. Optimization of fermentation processes by quantitative analysis: from analytical biochemistry to chemical engineering. *Dalam*: El-mansi, E.M.T. & C.F.A. Bryce. 1999. *Fermentation microbiology and biotechnology*. Taylor, London: xv + 308 hlm.

- Muzzarelli, R.A.A. 1977. *Chitin*. Pergamon Press, Oxford: vii + 309 hlm.
- Nasran, S., F. Ariyani, N. Indriati. 2003. Produksi kitinase dan kitin deasetilase dari *Vibrio harveyi*. *Jurnal Penelitian Perikanan Indonesia*. **9(5)**: 33--38.
- Park, S.H., J. Lee & H.K. Lee. 2000. Purification and characterization of chitinase from a marine bacterium, *Vibrio* sp. 98CJ11027. *The Journal of Microbiology*. **38(4)**: 224--229.
- Patil, R.S., V. Ghormade & M.V. Deshpande. 2000. Chitinolytic enzymes: An exploration. *Enzyme and Microbial Technology*. **26**: 473--483.
- Pleban, S., L. Chernin & I. Chet. 1997. Chitinolytic activity of an endophytic strain of *Bacillus cereus*. *Letters in Applied Microbiology*. **25**: 284--288.
- Rachman, A. 1989. *Pengantar teknologi fermentasi*. Departemen Pendidikan dan Kebudayaan Direktorat Jendral Pendidikan Tinggi Pusat Antar Universitas Pangan dan Gizi Institut Pertanian Bogor, Bogor: viii + 146 hlm.
- Rachman, A. 1992. *Teknologi fermentasi*. Departemen Pendidikan dan Kebudayaan Direktorat Jendral Pendidikan Tinggi Pusat Antar Universitas Pangan dan Gizi Institut Pertanian Bogor, Bogor: viii + 188 hlm.
- Ray, B. 2004. *Fundamental food microbiology*. 3th ed. CRC Press, Boca Raton: x + 608 hlm.

- Romaguerra, A., U. Menge, R. Breves & H. Diekmann. 1992. Chitinases of *Streptomyces olivaceoviridis* and significance of processing for Multiplicity. *Journal of Bacteriology*. **174**(11): 3450--3454.
- Sakai, K., A. Yokota, H. Kurokawa, M. Wakayama & M. Moriguchi. 1998. Purification and characterization of three thermostable endochitinases of a noble *Bacillus* strain, MH-1, isolated from chitin-containing compost. *Appl. Environ. Microbiol.* **64**(9): 3397--3402.
- Sea grant. 2007. Chitin research. (?): 1 hlm. <http://www.ocean.udel.edu>. 27 Maret 2007, pk 21.30 WIB.
- Simunek, J., G. Tishchenko, K. Rozhetsky, H. Bartonova, J. Kopecny & B. Hordova. 2004. Chitinolytic enzymes from *Clostridium aminovalericum*: Activity screening and purification. *Folia Microbiol.* **49**(2): 194--198.
- Singh, P.P., Yong Chuj Shin, Chang Seuk Park & Young Ryun Chung. 1999. Biological control of *Fusarium* wilt of cucumber by chitinolytic bacteria. *Phytopathology*. **89**(1): 92--99.
- Spindler, K.-D. 1997. Chitinase and chitosanase assay. *Dalam*: Muzzarelli, R.A.A. & M.G. Peter. 1997. *Chitin handbook*. European Chitin Society, Atec: xv + 528 hlm.
- Stenesh, J. 1984. *Experimental biochemistry*. Allyn & Bacon, Inc., Massachusetts: vii + 599 hlm.

- Suhartono, M.T. 1989. *Enzim dan bioteknologi*. Departemen Pendidikan dan Kebudayaan Direktorat Jendral Pendidikan Tinggi Antar Universitas Bioteknologi Institut Pertanian Bogor, Bogor: vi + 322 hlm.
- Suryanto, D., E. Munir & Yurnaliza. 2006. Eksplorasi bakteri kitinolitik: keragaman genetik gen penyandi kitinase pada berbagai jenis bakteri. *USU repository*: 1--22 hlm.
- Svtil, A.L., M.N. Sinead, A.M. Jessica & L.K. David. 1997. Chitin degradation protein produced by the marine bacterium *Vibrio harveyi* growing on different forms of chitin. *Appl. Environ. Microbiol.* **63**(2): 408--413.
- Thompson, S.E., M. Smith, M.C. Wilkinson & K. Peek. 2001. Identification and characterization of a chitinase antigen from *Pseudomonas aeruginosa* strain 385. *Appl. Environ. Microbiol.* **67**(9): 4001--4008.
- Tortora, G.J., B.R. Funke & C.L. Case. 2001. *Microbiology an introduction*. 7th ed. An imprint of Addison Wesley Longman, Inc., San Francisco: xxiv + 887 hlm.
- Tsujibo, H., K. Minoura, K. Miyamoto, H. Endo, M. Moriwaki & Y. Inamori. 1993. Purification and properties of thermostable chitinase from *Streptomyces thermoviolaceus* OPC-520. *Appl. Environ. Microbiol.* **59**(2): 620--622.
- Vogan, C.L., C. Costa-Ramos & A.F. Rowley. 2002. Shell disease syndrom in the edible crab, cancer pagurus-isolation, characterization and pathogenicity of chitinolytic bacteria. *Microbiology.* **148**: 743--754.

- Waldeck, J., G. Daum, B. Bisping & F. Meinhardt. 2006. Isolation and molecular characterization of chitinase deficient *Bacillus licheneformis* strains capable of deproteinization of shrimp shell waste to obtain highly viscous chitin. *Appl. Environ. Microbiol.* **72**(12): 7879--7885.
- Wang, San-Lang & Chang, When-Tsu. 1997. Purification and characterization of two bifunctional chitinases/lysozylms extracellularly produced by *Pseudomonas aeruginosa* K-187 in a shrimp and crab shell powder medium. *Appl. Environ. Microbiol.* **63**(2): 380--386.
- Wilson, K. & J. Walker. 2000. *Principles and techniques of practical biochemistry*. 5th ed. Cambridge University Press, Cambridge: xviii + 784 hlm.
- Winarno, F.G. 1995. *Enzim pangan*. PT. Gramedia, Jakarta: xii + 115 hlm.