



## DAFTAR PUSTAKA

- Anis, D.R. 2010. Pengembangan media halal berbasis whey untuk pertumbuhan *Lactobacillus plantarum* Dad 13. Skripsi. Yogyakarta : Universitas Gadjah Mada.
- Anonim. 2015. Frozen Yogurt Production in The US. <http://www.statista.com/statistics/255016/frozen-yogurt-production-in-the-us/>
- Arul, V., Kanmani, P., Kumar, R.S., Yufaraj, N., Paari, K.A. 2011. Effect of cryopreservation and microencapsulation of lactic acid bacterium *Enterococcus faecium* MC13 for long term storage. *Biochem. Eng. J.* 58: 140-147.
- Axelson, L. 1998. Lactic acid bacteria : classification and physiology. In : Salminen S. *Lactic Acid Bacteria, Microbiological and Functional Aspect*. New York : Marcel Decker.
- Axelson, L. 2004. Lactic acid bacteria : classification and physiology. In : Salminen S. *Lactic Acid Bacteria, Microbiological and Functional Aspect*. New York : Marcel Decker.
- Ayar, A dan Burucu, H. 2013. Effect of whey fermentation on microbial and physicochemical properties of probiotic ayran. *Int Food Res J* 20: 1409-1415.
- Brashears, M.M. dan Gilliland, S.E. 1995. Survival during frozen and subsequent refrigerated storage of *Lactobacillus acidophilus* cells as influenced by their growth phase. *J. Dairy Sci.* 78:2326-2335.
- Carvalho, A.S., Silva, J., Ho, P., Teixeira, P., Malcata, F.X., Gibbs, P. 2003. Impedimetric method for estimating the residual activity of freeze dried *Lactobacillus delbrueckii* ssp. *bulgaricus*. *Intl Dairy Jour* 13: 463-468.
- Carvalho, A.S., Silva, J., Ho, P., Teixeira, P., Malcata, F.X., Gibbs, P. 2004. Relevant factors for preparation of freeze dried lactic acid bacteria. *Intl Dairy Jour* 14: 835-847.
- Castro, H., Teixeira, P.M., Kirby, R. 1996. Change in the membrane of *Lactobacillus bulgaricus* during storage following freeze drying. *Biotech. Letter* 18: 99-104.
- Champagne, C.P., Gardner, N., Brochu, E., Beaulieu, Y. 1991. The freeze drying of lactic acid bacteria. A review. *Can. Inst. Sci. Technol* 24:118-128.



Clarizza, V. 2015. Pengaruh variasi konsentrasi skim milk sebagai *cryoprotectant* pada viabilitas kultur kering beku *Lactobacillus plantarum* Dad 13. Skripsi. Yogyakarta : Universitas Gadjah Mada.

Crowe, J.H., Carpenter, J.F., Crowe, L.M., Anchordoguy, F.J. 1990. Are and dehydration similar stress vectors ? A comparison of modes of interaction of stabilizing solutes with biomolecules. *Cryobiology* 27: 219-231.

de Valdez, G.F., de Giori, G.S., de Ruiz Holgado, Oliver, G. 1983. Comparative study of the efficiency of some additives in protecting of lactic acid bacteria against freeze drying. *Cryobiology* 20: 560-566.

de Valdez, G.F., Martoz, M.P., Taranto, G., de Ruiz Holgado. 1997. Influence of bile on galactosidase activity and cell viability of *Lactobacillus reuteri* when subjected to freeze drying. *J. Dairy Sci.* 80: 1955-1958.

de Valdez, G.F., Pescuma, M., Hebert, E.M., Mozzi, F. 2008. Whey fermentation by thermophilic lactic acid bacteria : evolution of carbohydrate and protein content. *Food Microbiology* 25: 442-451

de Valdez, G.F., Pescuma, M., Hebert, E.M., Mozzi, F. 2010. Functional fermented whey based beverage using lactic acid bacteria. *Food Microbiology* 141: 73-81.

de Vreze, M dan Schrezenmeir, J. 2008. *Probiotics, Prebiotics and Synbiotics*. Berlin : Springer-Verlag.

Diana, B dan Helmut, V. 2006. Effect of protective agents on the viability of *Lactococcus lactis* subjected to freeze thawing and freeze drying. *Sci Pharm* 74: 137-149.

Giri, S.K. dan Tripathi, M.K. 2014. Probiotic functional foods : Survival of probiotic during processing and storage. *J. Functional Foods* 9:225-241.

Goldberg, I dan Eschar, L. 1977. Stability of lactic acid bacteria to freezing as related to their fatty acid composition. *Appl. Environ. Microbiol.* 33:489.

Harmayani, E., Ngatirah, Rahayu, E.S., Utami, T. 2001. Ketahanan dan viabilitas probiotik bakteri asam laktat selama proses pembuatan kultur kering dengan metode freeze dan spray drying. *J. Teknol. Dan Industri Pangan* 12: 126-132.

Harmayani, E., Kasmiati, Rahayu, E.S., Utami, T. 2003. Production of low lactose yogurt using indigenous lactic acid bacteria. *Intl. Confer. Functional Food* : 48-56.

Hartati, Sri. 2002. Suplementasi Lactobacilli probiotik yang mempunyai kemampuan asimilasi kolesterol dan konjugasi garam empedu dalam sari buah pepaya-nanas. Tesis S2. Yogyakarta : Universitas Gadjah Mada.



- Hubalek, Z. 2003. Protectant used in cryopreservation of microorganisms. *Cryobiology* 46: 205-229.
- Hurst, A dan A. Hughes. 1977. Bacterial injury: a review. *Can. J. Microboal* 23: 935-944
- Jay, J.M. 1992. *Modern of Food Microbiology 4<sup>th</sup> edition*. New York : Van Nostrand Reinhold.
- Jennings, T.A. 1999. *Lyophilization, Introduction and Basic Principles*. Denver : Interpharm Press.
- Kasmiati, Tyas U., Eni H., dan Endang S.R. 2002. Potensi Bakteri Asam Laktat Indigenous untuk Menurunkan Kadar Laktosa. *Seminar Nasional PATPI Malang*: ISBN 979-95249-6-2.
- Kennedy, J.F., Panesar, P.S., Gandhi, D.N., Bunko, K. 2007. Bioutilisation of whey for lactic acid production. *Food Chemistry* 105: 1-14.
- Konig, H dan Frohlich, J. 2009. *Biology of Microorganisms on Grapes, in Must and in Wine*. Berlin : Springer-Verlag.
- Li, B., Tian, F., Liu, X., Zhao, J. 2011. Effect of cryoprotectants on viability of *Lactobacillus reuteri* CICC6226. *Appl. Microbiol. Biotech* 92: 602-616
- Maguin, E., Guchte, M., Serror, P., Chervaux, C., Smoxvina, T. 2002. Stress responses in lactic acid bacteria. *Antonie van Leeuwenhoek* 82: 187-286.
- Mazur, P. dan Miller, R.H. 1976. Survival of frozen thawed human red cells as a function of the permeation of glycerol and sucrose. *Cryobiology* 13: 523-536.
- Merchesi, J dan Shanahan, F. 2007. The Normal Intestinal Microbiota. *Curr Opin Infect Dis* 20: 508-513.
- Meryman, H.T., Williams, R.J., Douglas, J. 1977. Freezing injury from solution effect and its prevention by natural artificial cryoprotection. New York : Academic Press.
- Mironescu, S. dan Simpson, J.F. 1975. Hyperosmotic injury in Chinese hamster cells. *Cryobiology* 12: 581.
- Miyamoto, S.Y., Imaizumi, T., Sukenobe, J., Marakami, Y., Kawamura, S., Komatsu, Y. 2000. Survival rate of microbes after freeze drying and long term storage. *Cryobiology* 41: 251-255.
- Muller, J.A., Ross, R.P., Fitzgerald, G.F., Staton, C. 2009. *Manufacture of Probiotic Bacteria*. Berlin : Springer-Verlag.



Ngatirah, Eni H., Endang S., Tyas U. 2000. Seleksi bakteri asam laktat sebagai agensi probiotik yang berpotensi menurunkan kolesterol. *Prosiding Seminar Nasional Industri Pangan* 2: 63-70.

Peebles, M.M., Gilliland, S.E., Speck, M.L. 1969. Preparation of concentrated lactic streptococcus starter. *Appl. Microbiol* 17: 805.

Prapulla, S.G., Reddy, K.B., Awasthi, S.P., Madhu, A.N. 2009. Role of cryoprotectants on the viability and functional properties of probiotic lactic acid bacteria during freeze drying. *Food Biotechnology* 23: 243-265.

Roosyinda, M. 2015. Pengaruh variasi konsentrasi sukrosa sebagai *cryoprotectant* pada viabilitas kultur kering beku *Lactobacillus plantarum* Dad 13. Skripsi. Yogyakarta : Universitas Gadjah Mada.

Santivarangkna, C., Higl, B., Foerst, P. Protection mechanism of sugar during different stages of preparation process of dried lactic acid starter cultures. *Food Microbiology* 25: 429-441.

Stanton, C., Miao, S., Mills, S., Ross, P.R. 2008. Effect of disaccharides on survival during storage of freeze dried probiotics. *Dairy Sci. Tech* 88: 19-30.

Stiles, M.E., Holzapfel, W.H. 1997. Lactic acid bacteria of foods and their current taxonomy. *Int J Food Microbiol* 36: 1-29.

Surono, I.S. dan Hosono, A. 2000. Performance of Dadih Culture in Fluid Milk Application at Low Temperature Storage. *Asian-Aus. J. Anim.Sci* : 495-498.

Winarno, F.G., dan Fernandez, I. 2007. *Susu dan Produk Fermentasinya*. Bogor : M-Brio Press.

Winarno, F.G., Winarno, W.A., Widjajanto, W. 2003. *Flora Usus dan Yoghurt*. Bogor : M-Brio Press.

Wright, C.T. dan Klaenhammer, T.R. 1983. *Survival of Lactobacillus bulgaricus* during freezing and freeze drying after growth in the presence of calcium. *J. Food. Sci.* 48: 773.

Yi, X., Kot, E., Bezkorovainy, A. 1998. Properties of NADH oxidase from *Lactobacillus delbrueckii* ssp. *bulgaricus*. *J. Sci. Food Agric* 78: 527-534.