

DAFTAR PUSTAKA

- Almeida, H., Amaral, M.H., and Lobao, P. 2012. Temperature and pH stimuli-responsive polymers and their applications in controlled and self-regulated drug delivery. *Journal of Applied Pharmaceutical Science*, Vol. 2 No.6, pp.01-10.
- Anandharamakrishnan, C. and Ishwarya, P. 2015. Spray Drying Techniques for Food Ingredient Encapsulation. pp 101-122.
- Anekella, K. 2011. Microencapsulation of probiotics (*Lactobacillus acidophilus* and *Lactobacillus rhamnosus*) in raspberry powder by spray drying: optimization and storage stability studies. *Tesis*. McGill University, Canada.
- Arepally, D. and Goswami, T. K. 2018. Effect of inlet air temperature and gum Arabic concentration on encapsulation of probiotics by spray drying. *LWT-Food Science and Technology*, Vol. 99, pp.583-593
- Arunan, E., Desariju, G.R., Klein, R.A., Sadlej, J., Scheihner, S., Alkorta, L., Clary, D.C., Crabtree, R.H., Dannenberg, J.J., Hobza, P., Kjaergaard, H.G., Legon, A.,C., Menucci, B., Nesbitt, D.J., 2011. Definition of the hydrogen bond (IUPAC recommendations 2011). *Pure Appl. Chem*, Vol.83 No.8, pp. 1637-1641.
- Augsburger, L., and Hoag, S., 2008. *Pharmaceutical dosage forms : tablets*. 3rd Ed. Vol. 2. New York: Informa Healthcare USA, pp. 399-437.
- Bando, H. and McGinity, J. W. 2006. Relationship between drug dissolution and leaching of plasticizer for pellets coated with an aqueous Eudragit® S100:L100 dispersion. *International Journal of Pharmaceutics*, Vol. 323(1–2), pp. 11–17.
- Barros, J.M.S De, Charalampopoulos, D., Khutoryanskiy,V.V., Edwards, A.D. 2015 . Enteric coated spheres produced by extrusion/spheronization provide effective gastric protection and efficient release of live therapeutic bacteria . *International Journal of Pharmaceutics*, Vol. 493, pp. 483-494.
- Behboudi-Jobbehdar, S., Soukoulis, C., Yonekura, L., and Fisk, I. 2013.

- Optimization of spray-drying process conditions for the production of maximally viable microencapsulated *L.acidophilus* NCIMB 701748. *Drying Technology*, Vol. 31 No. 11, pp. 1274–1283.
- Chen, W., Palazzo, A., Hennink, W. and Kok, R. 2016. Effect of Particle Size on Drug Loading and Release Kinetics of Gefitinib-Loaded PLGA Microspheres. *Molecular Pharmaceutics*, Vol. 14 No.2, pp 459-467.
- Ferrari, C. C., Germer, S.P.M., and Aguirre, J.M. 2012. Effects of spray-drying conditions on the physicochemical properties of effects of spray-drying conditions on the physicochemical properties of blackberry powder. *Drying Technology*, Vol. 30 No. 2, pp. 154-163.
- Garrity, G. M., Bell, J.A., and Lilburn, T.G. 2004. Taxonomic outline of the prokaryotes bergey's manual of systematic bacteriology. 2nd Ed. New York: Springer
- Gaur, P. K., Mishra, S., Gautam, R., Singh, A., and Yasir, M. 2014. Film coating technology: past, present and future. *Journal of Pharmaceutical Sciences and Pharmacology*, Vol.1 No. 1, pp. 57–67.
- Gbassi, G. K. and Vandamme, T. 2012. Probiotic encapsulation technology: from microencapsulation to release into the gut. *Pharmaceutics*, Vol. 4, pp. 149–163.
- Grainger, S.J. and El-Sayed, M.E.H. 2010. Stimuli-sensitive particles for drug delivery. *Biologically-responsive hybrid biomaterials*, Vol.10, pp. 171–190.
- He, Y., Zhu, B., Inoue Y. 2004. Hydrogen bond in polymer blends. *Elsevier Ltd*, Vol. 29 No.6, pp.1021-1051.
- Huq, T., Khan, A., Khan, R.A., Riedl, B., and Lacroix, M. 2013. Encapsulation of probiotic bacteria in biopolymeric system encapsulation of probiotic bacteria in biopolymeric system. *Critical Reviews in Food Science and Nutrition*, Vol. 53 No. 9, pp. 909–916.

- Jain, K.K. 2008. Drug delivery system. *Methods in Molecular Biology*, Vol. 437. New Jersey. Humana Press.
- Jain, D., Raturi R., Jain V., Bansal P., Singh R. 2011. Recent technologies in pulsatile drug delivery systems. *Biomatter*, Vol. 1 No. 1, pp. 57-65.
- Jiang, G., Thanoo, B. C. and DeLuca, P. P. 2002. Effect of osmotic pressure in the solvent extraction phase on BSA rel. *Pharmaceutical Development and Technology*, Vol. 7 No. 44, pp. 391-399.
- Kechagia, M., Basaolis, D., Konstantopoulou, S., Dimitriadi, D., Gyftopoulou, K., Skarmoutsou, N., Fakiri, E.M. 2013. Health benefits of probiotics: a review. *ISRN Nutrition*, Vol. 2013, pp. 1-7.
- Kumar, B.P., Chandiran, I.S., Bhavya, B., and Sindhuri, M. 2011. Microparticulate drug delivery system : a review. *Indian Journal of Pharmaceutical Science & Research*, Vol. 1 No. 1, pp. 19-37.
- Kumari, S., Nagpal, M., Aggarwal, G., Puneet, Jain, U.K., and Sharma, P. 2016. Microparticles drug delivery system : a review. *World Journal of Pharmacy and Pharmaceutical Sciences*, Vol. 5 No.3, pp. 543-566.
- Lacroix, C. and Yildirim, S. 2007. Fermentation technologies for the production of probiotics with high viability and functionality. *Current Opinion in Biotechnology*, Vol. 18 No. 2, pp. 176-183.
- Lemon, M.T., Jones, M.S., Stansbury, J.W. 2007. Hydrogen bonding interaction in methacrylate monomers and polymers. *Journal of Biomedical Materials Research*, Vol. 83A No.3, pp. 734-746
- Liu, H., Gong, J., Chabot, D., Miller, S.S., Cui, S., Ma, J., Zhong, F., and Wang, Q. 2015. Protection of heat-sensitive probiotic bacteria during spray-drying by sodium caseinate stabilized fat particles. *Food Hydrocolloids*, Vol. 51, pp. 459-467.
- Martin, M.J., Lara-Villoslada, F., Ruiz, M.A. & Morales, M.E. 2014. Microencapsulation of bacteria: a review of different technologies and their impact on the probiotic effects. *Innovative Food Science*

and Emerging Technologies, Vol. 27, pp. 15-25.

Mishra, M. and Mishra, B. 2011. Formulation optimization and characterization of spray dried microparticles for inhalation delivery of doxycycline hydiate. *Yakugaku Zasshi*, Vol. 131 No. 12, pp. 1813–1825.

Markowiak, P. and Ślizewska, K. 2017. Effects of probiotics, prebiotics, and synbiotics on human health. *Nutrients*, Vol.9 No.9.

Mortazavian, A., Razavi, S.H., Ehsani, M.R., Sohrabvandi, S., 2007. Principles and methods of microencapsulation of probiotic microorganisms. *Iranian Journal of Microbiology*, Vol.5 No.1, pp. 1–18.

Nagy, G., Pinczes, G., Pinter, G., Pocsi, I., Prokisch, J., and Banfalvi, G. 2016. In situ electron microscopy of lactomicroselenium particles in probiotic bacteria. *International Journal of Molecular Sciences*, Vol. 17 No.7, pp.1047

Nollenberger, K. and Albers, J. 2013. Poly(meth)acrylate-based coatings. *International Journal of Pharmaceutics*, Vol. 457 No.2, pp. 461–469.

Panesar, P.S., Kennedy, J.F., Knill, C.J., and Kosseva, M. 2010. Production of L (+) lactic acid using *Latobacillus casei* from whey. *Brazilian Archives of Biology and Technology*, Vol. 53 No.1, pp.219-226.

Parikh, T., Gupta, S.S., Meena, A., and Scrajuddin, A.T.M. 2014. Investigation of thermal and viscoelastic properties of polymers relevant to hot melt extrusion - III: Polymethacrylates and polymethacrylic acid based polymers . *J. Excipients and Food Chem*, Vol.5 No.1, pp. 56–64.

Patel, R.P., Patel, M.P. and Suthar, A. 2009. Spray drying technology :an overview. *Indian Journal of Science and Technology*, Vol. 2 No. 10, pp. 44–47.

Patra, C.N. , Priya, P., Suryakanta S., Jena, G.K., Panigrahi, K. C., Ghose, D., 2017. Pharmaceutical significance of eudragit: a review. *Future Journal of Pharmaceutical Sciences*.

- Perrie, Y. and Rades, T. 2010. Controlling drug delivery . in : *Pharmaceutics-Drug Delivery and Targetting*, London: Pharmaceuticall press.
- Rowe, R.C., Sheskey, P.J., and Quinn, M.E. 2009. *Handbook of Pharmaceutical Excipients*. 6th Edition. London: Pharmaceutical Press.
- Sahadeva, R.P.K., Leong S.F., Chua, K.H., Tan, C.H., Chan, H.Y., Tong, E.V., Wong, S.Y.W, and Chan, H.K. 2011. Survival of commercial probiotic strains to pH and bile. *International Food Research Journal*, Vol.18 No.4, pp. 1515–1522.
- Santhalakshmy, S., Bosco, S.J.D., Francis, S., and Sabeena, M. 2015. Effect of inlet temperature on physicochemical properties of spray-dried jamun fruit juice powder. *Powder Technology*, Vol. 274, pp. 37–43.
- Serna-cock, L. and Vallejo-castillo, V. 2013. Probiotic encapsulation. *African Journal of Microbiology Research*, Vol.7 No.40. pp. 4743–4753.
- Shi, L., Li, Z., Li, D., Xu, M., Chen, H., Zhang, Z., and Tang, Z., 2013. Encapsulation of probiotic *Lactobacillus bulgaricus* in alginate – milk microspheres and evaluation of the survival in simulated gastrointestinal conditions. *Journal of Food Engineering*, Vol. 117 No. 1, pp. 99–104.
- Solanki, H. K., Pawar, D.D., Shah, D.A., Prajapat, V.D., Jani. G.K., Mulla, A.M., and Thakar, P.M., 2013. Development of microencapsulation delivery system for long-term preservation of probiotics as biotherapeutics agent. *BioMed Research International*, Vol. 2013, pp. 1-21.
- Singh, P., Medronho, B., Alves, L., Silva, G.J., Miguel, M.G. 2017. Development of carboxymethyl cellulose-chitosan hybrid micro- and macroparticles for encapsulation of probiotic bacteria. *Carbohydrate Polymers*. Vol. 175, pp. 87–95.
- Sugiyartono. 2016. Model sistem mikropartikel pulsatile *lactobacillus acidophilus* FNCC 0051 dengan matriks kombinasi kopolimer

- asam metakrilat. *Disertasi*. Universitas Airlangga, Surabaya.
- Tasik, J. K. 2013. Pengaruh bakteri probiotik dari susu kerbau terhadap aktivitas imunoglobulin pada mencit jantan *mus musculus*. Jurusan Biologi, Fakultas Biologi dan Ilmu Pengetahuan Alam. Makasar : Universitas Hasanudin.
- Thakral, S., Thakral, N. K. and Majumdar, D. K. 2013. Eudragit : a technology evaluation. *Expert opinion on drug delivery*, Vol. 10 No. 1, pp. 131–149.
- Venkatesan, P., Manavalan, R. and Valliapan, K. 2009. Microencapsulation: a vital technique in novel drug delivery system. *Journal of Pharmaceutical Sciences and Research*, Vol.1 No.4, pp. 26–35.
- Willey, J.M., Sherwood, L.M., & Woolverton C.J., 2014. **prescott's Microbiology**. Ninth Edition. New York: Mc Graw Hill Education, pp. 130.
- Wu, Y. and Zhang, G. 2018. Synbiotic encapsulation of probiotic *Latobacillus plantarum* by alginate -arabinoxylan composite microspheres. *LWT - Food Science and Technology*, Vol. 93, pp. 135–141.
- Yeo, Y. and Park, K. 2004. Control of encapsulation and initial burst in polymeric microparticle systems. *Archives of Pharmacal Research*, Vol. 27 No.1, pp. 1–12.
- Yoshida, T., Lai, T.C., Kwon, G.S., and Sako, K. 2013. pH- and ion-sensitive polymers for drug delivery. *National Institute of Health*, Vol.64 No.12, pp. 1497-1513.
- Yuliani, S., Desmawarni, Harimurti, N., Yuliani, S.S. 2007. Pengaruh laju alir umpan dan suhu inlet spray drying. *J. Pascapanen*, Vol.4 No.1, pp. 18–26.
- Yuniastuti, A. 2014. Probiotik (dalam perspektif kesehatan). *Buku Monograf*. Semarang : UNNES PRESS.