

DAFTAR PUSTAKA

Abdou, H.M. 1989. *Dissolution, bioavailability and bioequivalence*. Pennsylvania: Mark Publishing Company Easton.

Adibkia K, Jalali MB, Esfanjani HM, Ghanbarzadeh S, Shokri J, Sabzevari A, Javadzadeh Y. 2013. Physicochemical Characterization of Naproxen Solid Dispersions Prepared via Spray Drying Technology. *Powder Technology*. 246: 448-455.

Ankit, M., Manish, Y., & Dinesh, C. 2014. Solid dispersion: A technique to improve solubility of poorly water soluble drug. *Indo Am J Pharm Res*, 4(6), 2855-66.

Ansel, H. C. 2008. *Pengantar Bentuk Sediaan Farmasi*. Jakarta: Universitas Indonesia Press.

Ansel CH. 2011. *Pengantar Bentuk Sediaan Farmasi*. Jakarta: Universitas Indonesia Press.

Aulton ME. 2007. *Aulton's Pharmaceutics The Design and Manufacture of Medicines*. New York : Churchill Livingstone Elsevier.

Banaker, U. V. 1991. *Pharmaceutical dissolution testing*. New York: Marcel Dekker.

Barker, S.A., Yap, S.P., Yuen, K.H., McCoy, C.P., Murphy, J.R., Craig, D.Q.M. 2003. An investigation into the structure and bioavailability of α -tocopherol dispersions in Gelucire 44/14. *Journal of Controlled Release* 91(3),477-488

Behera, B. C., N. Verma, A. Sonone & U. Makhija. 2005. Antioxidant and Antibacterial Activities of Lichen *Usnea Ghattensis* In Vitro. *Biotechnology Letters*, 27(14), 991-995

Bhusnure, O. G., Yogita, M., Gholve, S. S., & Sidram, G. P. 2016. Formulation and Evaluation of Poorly Aqueous Soluble Drug by Solid Dispersion Method. *Journal of Pharmacy Research* , 10(1), 33-40.

Campanella, L., M. Delfini, P. Ercole, A. Lacoangeli & G. Risuleo. 2002. Molecular Characterization and Action of Usnic Acid: A Drug That Inhibits Proliferations of Mouse Polyomavirus *In Vitro* and Whose Main Target is RNA Transcription. *Biochimie*, 84(4), 329-334.

Cansaran D, Kahya D, Yurdakulol E, Atakol O. 2006. Identification and quantitation of usnic acid from the lichen *Usnea* species of Anatolia and antimicrobial activity. *Z Naturforsch C*. 61(11-12), 773-776.

Cansaran D, Aras Sumer, & Atakol Organ. 2008. Determination of Usnic Acid Content in Some Lichen Species Found in Anatolia. *Journal of Applied Biological Science* 2 (3), 41-44,2008

Chiou, W. L., & Riegelman, S. 1971. Pharmaceutical Applications of Solid Dispersion System. *Journal of Pharmaceutical Science*, 60 (9), 1281-1302.

Damian, S., Blanton, N., Naesens, L., Balzarini, J., Kinget, R., Augustikns, P., Mooter, G.V.D. 2000. Physicochemical characterization of solid dispersions of the antiviral agent UC-781 with polyethylene glycol 6000 and Gelucire 44/14. *European Journal of Pharmaceutical Sciences* 10 (2000), 311–322

Dachriyanus. 2004. Analisis Struktur Senyawa Organik Secara Spektroskopi. Padang: Universitas Andalas.

Depkes RI. 1979. *Farmakope Indonesia Edisi III*. Jakarta: Departemen Kesehatan Republik Indonesia.

Depkes RI. 2014. *Farmakope Indonesia Edisi V*. Jakarta: Departemen Kesehatan Republik Indonesia.

Fajr, I. 2002. Mempelajari proses Pembuatan Tepung dari Whey Tahu dengan Pengereng Semprot dan Pengereng Beku serta Analisis Sifat Fungsional Tepung yang Dihasilkan. [Program Pasca Sarjana]. Institut Pertanian Bogor.

Hayati, I., Bailey, A. I., & Tadros, T. F. 1987. Investigations into the mechanisms of electrohydrodynamic spraying of liquids: I. Effect of electric field and the environment on pendant drops and factors affecting the formation of stable jets and atomization. *Journal of Colloid and Interface Science*, 117(1), 205-221.

Ingolfsdottir, K. 2002. Usnic Acid. *Phytochemistry*, 61 (7), 729–736.

Ingvarsson, P.T., Yang, M., Nielsen, H.M., Rantanen, J., Foged, C., 2011. Stabilization of liposomes during drying. *Expert Opin. Drug Deliv.* 8(3), 375-388.

Kalia, A., & Poddar, M. 2011. Solid dispersions: an approach towards enhancing dissolution rate. *Int J Pharm Pharm Sci*, 3(4), 9-19.

Karatas, A., Yuksel, N., Baykara, T. 2005. Improved solubility and dissolution rate of piroxicam using gelucire 44/14 and labrasol. *Il Farmaco* 60 (2005) 777–782

Leuner, C., & Dressman, J. 2000. Improving drug solubility for oral delivery using solid dispersions. *European journal of Pharmaceutics and Biopharmaceutics*, 50(1), 47-60.

Lauterwein, M., Oethinger, M., Belsner, K., Peters, T., & Marre, R. 1995. In vitro activities of the lichen secondary metabolites vulpinic acid, (+)-usnic acid, and (-)-usnic acid against aerobic and anaerobic microorganisms. *Antimicrobial Agents and Chemotherapy*, 39(11), 2541-2543.

Martin, A., Swarbrick J., & Cammarata, A. 2009. *Farmasi Fisik Jilid 1*. Jakarta : UI Press.

Mayer, M. A. O'Neill, K. E. Murray, N. S. Santos- Magalhaes, A. M. Carneiro-Leao, A. M. Thompson and V. C. Appleyard. 2005. Usnic acid: a non-genotoxic compound with anti-cancer properties. *Anticancer Drugs*, 16(8), 805–809.

Nikghalb, L. A., Singh, G., Singh, G., & Kahkeshan, K. F. 2012. Solid dispersion: methods and polymers to increase the solubility of poorly soluble drugs. *Journal of Applied Pharmaceutical Science*, 2(10), 170-175.

Okuyama, E., K. Umeyama, M. Yamazaki, Y. Kinoshita & Y. Yamamoto. 1995. Usnic Acid and Diffractaic Acid as Analgesic and Antipyretic Components of Usnea Diffracta. *Planta Medica*, 61(2), 113-115.

O'Neil, M. J. 2001. *The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. 13th Edition*. Whitehouse Station, NJ: Merck and Co. Inc. 1762

Patel, R. P., Patel, D. J., Bhimani, D. B., & Patel, J. K. 2008. Physicochemical characterization and dissolution study of solid dispersions of furosemide with polyethylene glycol 6000 and polyvinylpyrrolidone K30. *Dissolution Technol*, 15(3), 17-25.

Perry, N. B., Benn M. H., Brennan N. J., Burgess E. J., Ellis G., Galloway D. J., Lorimer S. D., and Tangney R. S. 1999. Antimicrobial, antiviral and cytotoxic activity of New Zealand lichens. *Lichenologist*, 31(6), 627-636.

Rey S, Xialoin T & Michael J. 2004. Study Design of Freeze-Drying Processes for Pharmaceuticals: practical advice pharmaceutical research. *Eur. J. Pharm*, 21(2), 191-200.

Rowe, R.C., Sheskey, P.J., & Quinn, M.E. 2009. *Handbook of pharmaceutical excipient*, (6nd Ed). London: The Pharmaceutical Press..

Sathigari, S., Chadha, G., Lee, Y. H.P., Wright, N., Parsons, D. L., Rangari, V. K., Fasina, O., & Babu, R. J. 2009. Physicochemical Characterization of Evavirenz-

Cyclodextrin Inclusion Complex. *AAPS Pharmaceutical Science Technology*, 10(1) : 81-87.

Savjani KT, Gajjar AK, Savjani JK. 2012. Drug solubility: importance and enhancement techniques. *International Scholarly Research Network*, 2012.

Serajuddin, A. 1999. Solid dispersion technique. *Journal of Pharmaceutical Sciences*, 88(10), 891-900.

Shaker, M. A., 2017. Dissolution and bioavailability enhancement of Atorvastatin: Gelucire semisolid binary system. *Journal of Drug Delivery Science and Technology* 43 (2018) 178–184

Shargel, L., & Yu, A.B.C. 1999. *Applied Biopharmaceutics and Pharmacokinetics 4th edition*. New York: Appleton & Lange.

Shargel, L., Wu-Pong, S., & Yu, A.B.C. 2012. *Biofarmasetika dan Farmakokinetika Terapan*. Terjemahan oleh Budi Suprapti, Edisi Kelima. Surabaya: Airlangga University Press.

Sridhar, I., Abha, D., Bhagyashri, J., Vandana, W., & Jesal, D. 2013. Solid Dispersions: an Approach to Enhance Solubility of poorly Water Soluble Drug. *J Sci & Inn Res*, 2 (3), 685-694.

Stark, J. B., Walter, E. D., & Owens, H. S. 1950. Method of isolation of usnic acid from *Ramalina reticulata*. *Journal of the American Chemical Society*, 72(4), 1819-1820.

Susanti, S., 2017. Dispersi Padat : Teknologi Farmasi untuk Meningkatkan Kelarutan Obat. *Farmaka Suplemen*, 4(3).

Swarbrick, J., & Boylan, J. C. 1990. *Encyclopedia of pharmaceutical Technology*, Volume 3. New York: Basel. Hongkong, Marcel Dekker Inc.

Takai, M., Uehara, Y., & Beisler, J. A. 1979. Uronic acid derivatives as potential antineoplastic agents. *Journal of medicinal chemistry*, 22(11), 1380-1384.

Tang X, Pikal M. 2004. Design of freeze-drying processes for pharmaceuticals: practical advice. *Pharm. Res*, 21(2), 191–200.

Vasconcelos, T., Sarmiento, B., & Costa, P. 2007. Solid dispersions as strategy to improve oral bioavailability of poor water soluble drug. *Drug Discovery Today*, 12(23-24), 1068-1075.

Vijayakumar, C.S., Viswanathan, S., Kannappa Reddy, M., Parvathavarthini, S., Kundu, A.B., Sukumar, E. 2000. Antiinflammatory activity of (p)-usnic acid. *Fitoterapia*, 71(5), 564–566.

Voigt, R. 1995. *Pelajaran Teknologi Farmasi*. Translated by Soendani Noerono Soewandhi 5th edition. Yogyakarta: Gadjah Mada Press.

Wang W. 2000. Lyophilization and development of solid protein pharmaceuticals. *International journal of pharmaceutics* , 203(1-2), 1-60.

Wang, W., Chen, M., Chen, G., 2012. Issues in freeze drying of aqueous solutions. *Chin. J. Chem. Eng.* 20(3), 551-559.

Zaini, E., A.Halim, S.N. Soewandhi dan D. Setiawan. 2011. Peningkatan Laju Pelarutan Trimetoprim Melalui Metode Ko-Kristalisasi Dengan Nikotinamida. *Jurnal Farmasi Indonesia*. 5(4) 205 -212

Zaini, E., Witarsah, A. S., & Agustin, R. 2014. Enhancement of Dissolution Rate of Meloxicam by Co-grinding Technique using Hydroxypropyl methylcellulose. *Journal of Chemical and Pharmaceutical Research*, 6(11):263-267.

