

DAFTAR PUSTAKA

- Abdou, H.M. 1989. *Dissolution, Bioavailability and Bioequivalence*. Pennsylvania: Mark Publishing Company Easton.
- Alatas, F., Sundani, N.S., Lucy, S., Ismunandar, Hidehiro, U. 2013. Cocrystal Formation between Didanosine and Two Aromatic Acids. *Int J of Pharmacy and Pharm Scie*, 5(3), 275-280, 2013.
- 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, Howard C. 2011. *Pengantar Bentuk Sediaan Farmasi*. Jakarta : UI Press.
- Asahina, Y. & S. Shibata. 1971. *Chemistry of Lichens Substances*. 171-190. A. Asher & Co Ltd., Vaals-Amsterdam
- Banakar, U.V. 1991. *Pharmaceutical Dissolution Testing*. New York: Marcel Dekker Inc.
- Bekers, O., Uijtendaal, E.V., Beijnen, J.H, Bult, A., & Underberg, W.J.M. 1991. Cyclodextrin in the Pharmaceutical Field. *Drug Development and Industrial Pharmacy*. 17(11), 1503-1549.
- 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.* 6(1), 773-776.
- Celik, M., & Wendel, S.C. 2005. Spray Drying and Pharmaceutical Applications in Parikh, D.M. (Ed). *Handbook of Pharmaceutical Granulation Technology, 2nd Ed*. New York: Taylor and Francis Group.
- Chiou, W.L., & Riegelman, S. 1971. Pharmaceutical Applications of Solid Dispersion System. *Journal of Pharmaceutical Science.*, 60(9), 1281-1302.
- Cocchietto, M., Skert, N., Nimis, P.L., & Sava, G.A. 2002. Review On Usnic Acid, An Interesting Natural Coumpound. *Naturwissenschaften*. 89(4), 137-146.
- Dachriyanus. 2004. *Analisis struktur Senyawa organik secara spektroskopi*. Padang: Universitas Andalas.

- Dash, S., Murthy, P.N., Nath, L., Chowdhury, P. (2010). Kinetic Modeling on Drug Release from Controlled Drug delivery System. *Acta Poloniae Pharmaceutics-Drug Research*, 67(3), 217-223
- Departemen Kesehatan RI. 1979. *Farmakope Indonesia Edisi III*. Jakarta: Departemen Kesehatan Republik Indonesia.
- Departemen Kesehatan RI. 2014. *Farmakope Indonesia Edisi V*. Jakarta: Departemen Kesehatan Republik Indonesia.
- Dixit, R. P. S., Stuti. S. 2012. Solid Dispersions: a Strategy for Improving the Solubility of Poorly Soluble Drugs. *IJRPS*, 3(2), 960-966.
- Hancock, B.C., & G. Zografi. 1997. Characteristics and Significance of the Amorphous State in Pharmaceutical Systems. *J. Pharm. Sci*, 8(6), 1-12.
- Hayati, S.N., Hendra, H., Ema, D., Lusty, I., & Hardi, J. 2011. Profil Asam Amino Ekstrak Cacing Tanah (*Lumbricus Rubellus*) Terenkapsulasi dengan Metoda Spray Drying. *Balai Pengembangan Proses dan Teknologi Kimia (BPTTK)-LIPI*, 3(4), 1-7.
- Huang, Y., & Dai, W. G. 2014. Fundamental aspects of solid dispersion technology for poorly soluble drugs. *Acta Pharmaceutica Sinica B*, 4(1), 18-25.
- Huang, Z., Tao, J., Ruan, J., Li, C., & Zheng, G. 2014. Anti-Inflammatory Effects And Mechanisms Of Usnic Acid, A Compound Firstly Isolated From Lichen *Parmelia Saxatilis*. *J. Med. Plants Res.* 8(4) , 197-207.
- Huichao, W., Shouying D., Yang L., Ying L., & Di, W. 2014. The Application of Biomedical Polymer Material Hydroxypropylmethyl Cellulose (HPMC) in Pharmaceutical Preparations. *Journal of Chemical and Pharmaceutical Research*, 6(5), 155-160.
- Kalia, A., & Poddar, M. 2011. Solid dispersions: an approach towards enhancing dissolution rate. *Int J Pharm Pharm Sci*, 3(4), 9-19.
- Kapoor, B., Kaut, R., Kour, S., Behl, H., & Kour, S., 2012. Solid Dispersion: An Evolutionary Approach for Solubility Enhancement of Poorly Water Soluble Drugs. *International Journal of Recent Advances in Pharmaceutical Research*. 2(2), 1-16
- Kawabata, Y., Wada, K., Nakatani, M., Yamada, S., & Onoue, S. 2011. Formulation design for poorly water-soluble drugs based on biopharmaceutics classification system: basic approaches and practical applications. *International Journal of Pharmaceutics*, 420(1), 1-10.

- Kinraide, W.T.B. & Ahmadjian, V. 1970. The Effects Of Usnic Acid On The Physiology Of Two Cultured Species Of The Ichen Alga *Trebouxia* Pym. *Lichenologist*, 4(1), 234-247.
- Kumar, K, V., Arunkumar, N., Verma, P, R, P., Rani, C. 2009. Preparation And In Vitro Characterization of Valsartan Solid Dispersions Using Skimmed Milk Powder as Carrier. *International Journal of PharmTech Research*. 1(3), 431-437.
- Leuner, C., & Dressman, J. 2000. Improving drug solubility for oral delivery using solid dispersions. *European journal of Pharmaceutics and Biopharmaceutics*, 50(1), 47-60.
- Lukac, M., Prokipcak, I., Lacko, I., & Devinsky, F. 2012. Solubilisation Of (+)-Usnic Acid In Aqueous Micellar Solutions Of Gemini And Heterogemini Surfactans and Their Equimolar Mixture. *Acta Facultatis Pharmaceuticae Universitatis Comenianaee*. 10(2), 36-43.
- Marshak. A. 1947. A Crystalline Antibacterial Substance From The Lichen *Romalina Reticulata*. *Publ. Hlth Rep., Wash.* 6(2) , 3-9.
- Martin, A., Swarbrick J., & Cammarata, A. 2009. *Farmasi Fisik Jilid 1*. Jakarta : UI Press.
- 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., Umeyama, K., Yamazaki, M., Kinoshiata, Y. & Yamamoto, Y. 1995. Usnic Acid and diffractaic acid as analgesic and antipyretic components of *Usnea diffract*. *Planta Medica*, 61(2), 113-115.
- Oliveira, A.M., Kleber, L.G., Natalia, N.P.C., Ariane, S.T., & Joao, G.R.P. 2013. Nano Spray Drying as an Innovative Technology for Encapsulating Hydrophilic Active Pharmaceutical Ingredients (API). *Nanomedicine & Nanotechnology*. 4(6), 1-6
- O'Neill, M.A., Mayer, M., Murray, K. E., Rolim - Santos, H.M.L., Santos - Magalhaes, N.S., Thompson, A.M., & Appleyard, V.C.L. 2010. Does Usnic Acid Affect Microtubules in Human Cancer Cells. *Braz. J. Biol.*, 2010, 70(3), 659-664.
- O'Neil, M. J. 2001. *The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. 13th Edition*. Whitehouse Station, NJ: Merck and Co. Inc. Hal: 1762

- Ozturk, S., Guvenc, S., Arikan, N., & Yilmaz, O. 1999. Effect Of Usnic Acid On Mitotic Index In Root Tips Of *Allium Cepa* L. *Lagascalia*. 21(1), 47-52.
- Patel, R.P., M. P. Patel., & A. M. Suthar. 2009. Spray Drying Technology: An Overview. *Indian Journal of Science and Technology*, 2(10), 44-47.
- Riekes, M. K., Kuminek, G., Rauber, G. S., Maduro de Campos, C. E., Bortoluzzi, A. J., & Stulzer, H. K. 2014. HPMC as a potential enhancer of nimodipine biopharmaceutical properties via ball-milled solid dispersions. *Carbohydrate Polymers*, 99(2), 474-482.
- Ritiasa, K., Rekso, G.T., Hamid, B.J., & Karniani, M.A. 2010. *Info Obat Indonesia (edisi 2)*. Jakarta : Eranti Agratama.
- Ribiero-Costa, R.M., Alves, A.J., Santos, N.P., Nascimento, S.C., Goncalves, E.C.P., Silvia, N.H., Honda, N.K., & Santos-Magalhaes, N.S. 2004. In vitro and in vivo properties of usnic acid encapsulated into PLGA-microspheres. *J. Microencapsulation*. 21(4), 371-384.
- Rowe, R. C., Sheskey P. J., & Quinn M. E. 2009. *Handbook of pharmaceutical excipients 6th edition*. London : The pharmaceutical press.
- Shargel, L., Wu-Pong, S., & Yu, A.B.C. 2012. Biofarmasetika & farmakokinetika terapan. Terjemahan oleh Fasich dan Budi Suprpti, Edisi kelima, Surabaya: Airlangga University Press.
- Shoab, H.M., Merchant, H.A., Tazee, J., dan Yousuf, R.I. (2006). Once-Daily Tablet Formulation and In Vitro Release Evaluation of Cefpodoxime Using Hydroxypropyl Methylcellulose: A Technical Note. *AAPS PharmSciTech*. 7, 3, Article 78
- Stark, J.B., Walter, E.D., & Owens, H.S. 1950. Method of Isolation of usnic acid from *Ramalina Reticula*. *J. Am. Chem. Soc.* 72(1), 1819-1820.
- Sweetman, S.C. 2009. *Martindale, the complete drug reference 36th edition*. London: The Pharmaceutical Press.
- Takai, M., Uehara, Y., & Beisler, J. A. 1979. Usnic Acid derivatives as potential antineoplastic agents. *Journal of Medicinal Chemistry*. 2(2), 1380.
- Verheyen, S., Blaton, N., Kinget, R., & Van den Mooter, G. 2002. Mechanism of increased dissolution of diazepam and temazepam from polyethylene glycol 6000 solid dispersions. *International Journal of Pharmaceutics*, 249(1), 45-58.

- Verma, S., Rawat, A., Kaul, M., & Saini, S. 2011. Solid dispersion: a strategy for solubility enhancement. *International Journal of Pharmacy and Technology*, 3(2), 1062-1099.
- Vijayakumar, CS., Viswanathan, S., Reddy, MK., Parvathavarthini, AB., Kundu, AB. & Sukumar, E. 2000. Anti-inflammatory Activity of (+) –Utric acid. *Fitoterapia*. 71(5), 564-566.
- Wicaksono, Y., Hendradi, E., & Radjaram, A. (2005). *Analisis Proses Lepas Lambat Na Diklofenak dari Tablet Matrik Berbasis Etilselulosa Polivinilpirolidon K-30. Analisis Farmasi. Jakarta: EGC*
- Zaini, E., Halim, A., Soewandhi, S. N., & Setyawan, D. 2011. Peningkatan Laju Pelarutan Trimetoprim Melalui Metode Kokristalisasi dengan Nikotinamida. *Jurnal Farmasi Indonesia*, 5(1), 195-204.
- 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.
- Zaini, E., Yeyet, C.S., Soewandhi, S.N., & Halim, A. 2010. Identifikasi Interaksi Fisika antara Trimetoprim dan Sulfametoksazol dengan Metode Kontak Kofler dan Reaksi Kristalisasi. *Majalah Farmasi Indonesia*, 21(1), 32 – 39.



