

DAFTAR PUSTAKA

- Aaltonen J, Alleso M, Mirza S, Koradia V, Gordon KC, Rantanen J, 2009. Solid form screening – A review, *Eur J. Pharm. and Biopharm*, 71: 23-37.
- AIST, *IR Spectrum: Carbamazepine*. [Internet sitasi 2 Juni 2006]. Didapat dari: <http://www.aist.go.jp>.
- Ali W, Badawi AA, Mahdy MA, Hanan ME, 2013. Formulation and Evaluation of Carbamazepine 200 mg Immediate Release Tablets Using Polyethylene Glycol 6000, *Int J Pharm Pharm Sci* 5 (1) : 114-119.
- Amidon GL, Lennernas H, Shah VP, Crison, JR, 1995. A theoretical basis for a biopharmaceutic drug classification: the correlation of in vitro drug product dissolution and in vivo bioavailability. *Pharm Res*, 12: 413-420.
- Ansel HC, Popovich NG, Allen LV, 2011. *Pharmaceutical Dosage Form and Drug Delivery System*, 9th ed., Malvern : Williams & Wilkins, 104.
- Askenazi DJ, 2004. Management of a severe carbamazepine overdose using albumin-enhanced continous venous hemodialysis, *Pediatric*, 113 (2): 406-409.
- Aulton ME, 1988. *Pharmaceutics, The Science of Dosage Form Design*, International Student Edition, Churchill Livingstone, Edinburg, London.
- Avis KA, Lachman L, Lieberman HA, 1992. *Pharmaceutical Dosage Form : Parenteral Medication*, Volume 1, 2nd Ed, Marcel Dekker Inc, New York.
- Benoiton NL, 2006. *Chemistry of Peptide Synthesis*, CRC Press, New York, 12-13, 30-31, 197-198.
- Bhise SB and Rajkumar M, 2008. Effect of HPMC on solubility and Dissolution of Carbamazepine Form III in Simulated Gastrointestinal Fluids, *Asian J. Pharm*, 2: 38-42
- Blagden N, Matas M, Gavan PT, York P, 2007. Crystal engineering of active pharmaceutical ingredients to improve solubility and dissolution rates, *Adv. Drug Dev. Rev.*, 59: 617-630.
- Bosselmann S and William III RO, 2012. Route-specific challanges in delivery of poorly-water soluble drugs in *Formulating Poorly Water Soluble Drugs*, Springer, New York, 1-22.

- Bley H, Fussnegger B, Bodmeier R, 2010, Characterization and stability of solid dispersions based on PEG-polymer blends, *Int. J Pharm.*, 390: 165-173.
- Budavari, 2001, *The Merc Index*, 13th Ed., Whitehouse Station, NJ: Merck Research Laboratories of Merck & Co, Inc, New Jersey, 1784.
- Carino SR, Speery DC, Hawley M, 2006. Relative Bioavailability Estimation of Carbamazepine Crystal Forms Using an Artificial Stomach-Duodenum Model, *J. Pharm. Sci.*, 95 (1): 118-125.
- Chen XQ, Antman MD, Gessenberg C, Gudmandsson OS, 2006. Discovery Pharmaceuticals, Challenges & Opportunities, *AAPS Journal*, 2: E 402-E408.
- Chieng N, Aaltonen J, Saville D, Rades T, 2009. Physical characterization and stability of amorphous indomethacin and ranitidine hydrochloride binary systems prepared by mechanical activation, *Eur J. Pharm. and Biopharm*, 71: 47-54.
- Craig DQM, and Reading M, 2007. *Thermal Analysis of Pharmaceuticals*. CRC Press Taylor and Francis Group, New York, 1-22.
- Dahan A, Miller JM and Amidon GL, 2009. Prediction of Solubility and Permeability Class Membership : Provisional BCS Classification of the World's Top Oral Drugs, *AAPS J.*, 4: 740-746.
- Departemen Kesehatan Republik Indonesia, 1995. *Farmakope Indonesia*, edisi IV, Departemen Kesehatan Republik Indonesia, Jakarta, 989-992.
- Deshmukh M, Shaop, Kutscher HL, Gao D, Sinko PJ, 2010. A series of α -amino acid Ester Prodrugs of Camphothecin : In Vitro Hydrolysis and A 549 Human Long Carcinoma Cell Cytotoxicity, *J. Med Chem*, 53(3): 1038-1047.
- Desh Raj S, Amit JA, Amit T, 2011. Solubilization of Poorly Soluble Drugs : A Review, *IJPSR*, II(I): 91-99.
- Dressman J, 2007. Drug Solubility : How to measure it, how to improve it, *Adv. Drug Dev. Rev.*, 59: 531-532.
- Faller B and Ertl P, 2007. Computational approaches to determine drug solubility, *Adv. Drug Deliv. Rev.*, 59 (7):533-545.
- Fessenden RJ and Fessenden JS, 1982. *Kimia Organik*, Edisi 2, Terjemahan Pudjaatmaka, Erlangga Press, Jakarta, 146-149, 383-394.
- Fleisher D, Bong R, Steward BH, 1996. Improved oral drug delivery : solubility limitations overcome by the use of prodrugs. *Adv. Drug Dev. Rev.*, 19: 115-130.

- Florence AT and Attwood D, 2006. *Physicochemical Principles of Pharmacy*, 4th Ed, Pharmaceutical Press, London, 56-91, 140-176.
- Gibson M, 2004. *Pharmaceutical Preformulation and Formulation : A Practical Guide from Candidate Drug Selection to Commercial Dosage Form*, Interpharm/CRC, Florida, 21-88.
- Guarino VR, Karunaratne V and Stella VJ, 2007. Sulfenamides as prodrugs of NH-acidic compounds : A new prodrug option for the amide bond, *Bioorg. Med. Chem. Lett.*, 17: 4910-4913.
- Grzesiak, Adam L, Lang, Meidong, Kim, Kibum, Matzger, and Adam J, 2003. Comparison of the Four Anhydrous Polymorphs of Carbamazepine and the Crystal Structure of Form I, *J. Pharm. Sci.*, 92: 2260–2271.
- Han HK, 2000. Targeted Prodrug Design to Optimize Drug Delivery, *AAPS Pharm.*, 2(1): 1-11.
- Harris RK, Ghi PY, Puschmann H, Apperley DC, Griesser UJ, Hammond RB, Ma C, Roberts KJ, Pearce GJ, Yates JR, and Pickard CJ, 2005. Structural Studies of the Polymorphs of Carbamazepine, its Dihydrate and Two Solvates, *Org Pro Res and Dev*, 9: 902-910.
- Harminta, 2004. Petunjuk Pelaksanaan Validasi Metode dan Cara Perhitungannya, *Majalah Ilmu Kefarmasian*, 1 (6): 117-133.
- Hecker JH, Calkins T, Price ME, Huie K, Chen S, Glinka TW, and Dudley MN, 2003. Prodrugs of Cephalosporin RWJ-333441 (MC-04,546) with Improved Aqueous Solubility, *J Antimicrob Agents Chemother*, 6: 2043-2046.
- Hemenway JN, Jarho P, Henri JT, Nair SK, Vandervelde D, Georg GI, and Stella VJ, 2010. Preparation and Physicochemical Characterization of Novel Water-Soluble Prodrug of Carbamazepine, *J Pharm Sci*, 4: 1810-1825.
- Horter D and Dressman JB, 2001. Influence of physicochemical properties on dissolution of drugs in the gastrointestinal tract. *Adv. Drug Dev. Rev.*, 46: 75-87.
- Husniati, 2008. Sintesis Senyawa Analog UK-3A : 3-Hidroksi-N-Oktil Pikolinamida, 2-Hidroksi-N-Fenil-Benzamida, 3-Hidroksi-N-Fenilpikolinamida, dan 2-Hidroksi-N-Oktilbenzamida dan Uji Bioaktivitas Secara In Vitro Terhadap Sel Kanker Murine Leukemia P-388, *Tesis*, Universitas Indonesia.
- Isadiartuti D, Soemartina and Widyastuti N, 2009, The Formation of Inclusion Complex of Carbamazepine-hydroxypropyl- β -cyclodextrin, *poster presented to the Joint conference 2nd Unair-USM*, Surabaya, Indonesia.

- Jalali MB, Mohajjel N, Valizadeh H, Hanaee J, Jalali AB, Adibkia K, Anoush M, Sistanizad M, 2006, Evaluation in vitro-in vivo correlation and anticonvulsive effect of carbamazepine after cogrinding with microcrystalline cellulose, *J Pharm. Pharmaceut. Sci*, 3: 307-316.
- Javadzadeh Y, Mohammadi A, and Khoei NS, 2009. Improvement of physicochemical properties of carbamazepine by recrystallization at different pH values, *Acta Pharm.* 59: 187–197.
- Kawabata Y, Wada K, Nakatani M, Yamada S, and Onoune S, 2011. Formulation design for poorly water-soluble drugs based on biopharmaceutics classification system : Basic approaches and practical applications. *Int J. Pharm.*, 420: 1-10.
- Kipourus K, Kachrimanis K, Nikolakakis L, Tserki, V, and Malamataris, S, 2006. Simultaneous Quantification of Carbamazepine Crystal Forms in Ternary Mixtures (I, III, and IV) by Diffuse Reflectance FTIR Spectroscopy (DRIFTS) and Multivariate Calibration, *J Pharm Sci*, 95 (11): 2419-2431.
- Kobayashi Y, Ito S, Itai S, and Yamamoto K, 2000. Physicochemical properties and bioavailability of carbamazepine polymorphs and dihydrates, *Int. J. Pharm.*, 193: 137-146.
- Koester LS, Bertual JB, Groch KR, Xavier CR, Moellerke R, Mayorga P, Costa DT, and Bassani VL, 2004. Bioavailability of carbamazepine : β -cyclodextrin complex in beagle dogs from hydroxypropylmethylcellulose matrix tablets, *Eur. J. Pharm. Sci*, 22: 201-207.
- Liu R, 2000. *Water Insoluble Drug Formulation*, CRC Press, New York, 65-110, 427-454.
- Lobenberg R and Amidon GL, 2000. Modern bioavailability, bioequivalence and biopharmaceutics classification system. New scientific approaches to International regulatory standards. *Eur. J. Pharm. Biopharm*, 50: 3-12.
- Lund W, 1994. *The Pharmaceutical Codex : Principles and Practice of Pharmaceutics*, Twelfth Ed, Pharmaceutical Press, London, 774-777.
- Mahalaxmi R, Ravikumar, Pandey1 S and Shirwaikar A, 2009. Effect of Recrystallization on Size, Shape, Polymorph and Dissolution of Carbamazepine, *Int. J. of PharmTech Res*, 1 (3): 725-732.
- Masubuchi Y, 2001. Differential selectivity in carbamazepine-induced inactivation of cytochrome P 450 enzymes in rat and human liver, *Arch. Toxicol*, 75: 538-543.

- Mc Namara and James O, 2001. *Drugs Effective in The Therapy of The Epilepsies* In : Hardman, Joel G., Limbird, Lee. E., (Ed), Goodman & Gilman's : The Pharmacological Basis of Therapeutics, 10th Ed, McGraw-Hill Co. Inc, Toronto, 533-534.
- Meyer MC, Straugan AB, Jarvi EJ, Wood GC, Pelsler FR, Shan VP, 1992. The bioinequivalence of carbamazepine tablets with a history of clinical failures, *Pharm Res.*, 9(12): 1612-1616.
- Moffat, Anthony C, Osselton, David and Brian W, 2004. *Clarke's Analysis of drug and Poisons*, 3rd Ed Vol II, Pharmaceutical Press, London, 747-749.
- Mohanachandran PS, Sindhumol PG and Kiran TS, 2010. Enhancement Of Solubility And Dissolution Rate: An Overview, *Pharmacie Globale*, 1(4): 1-10.
- Mowafy HM, Alanazi FK, Maghraby GME, 2012. Development and validation of an HPLC-UV method for the quantification of carbamazepine in rabbit plasma, *Saudi Pharm J.*, 20: 29-34.
- Muller CE, 2009. Prodrug Approaches for Enhancing the Bioavailability of Drugs with Low Solubility, *Chemistry & Biodiversity*, 6: 2071-2083.
- Murry MJ, 2008. *Organic Chemistry*, 7th Ed. Thomson Brooks, Hill Valley, 1016-1047.
- O'Neil MJ, 2006. *The Merck Index : An Encyclopedia of Chemicals, Drugs, and Biologicals*, 14th Ed, Merc & Co Inc, New Jersey, 473-474.
- Pavia, DL, Lamphman GM and Kriz GS, 1979. *Introduction to Spectroscopy : A Guide for Students of Organic Chemistry*, Saunders College Publishing, Philadelphia, 225- 285.
- Pearce RE, Vakkalagadda and Leeder JS, 2002. Pathways of Carbamazepine Bioactivation in Vitro I. Characterization of Human Cytochromes P450 Responsible for Formation of 2- and 3-Hydroxylated Metabolites, *Drug Met and Disp*, 30(11): 1170-1179.
- Prajapati, Tejal, Patel and Priyal, 2010. Influence of different solvents on crystal property and solubility characteristics of Carbamazepine. *Int J.PharmTech Res*, 2(2): 1615-1624.
- Qiao N, Li M, Schlindwein W, Malek N, Davis A and trappit G, 2011. Pharmaceutical Cocrystals: An overview, *Int. J. Pharm.*, 419: 1-11.
- Rahman Z, Agarabi C, Zidan, Ahmed S, Khan SR, and Mansoor A, 2011. Physico-mechanical and Stability Evaluation of Carbamazepine Cocrystal with Nicotinamide, *AAPS PharmSciTech*, 12 (2): 693-704.

- Rane Y, Mashru R, Sankalia M and Sankalia J, 2007. Effect of Hydrophilic Polymers on Dissolution Enhancement of Carbamazepine Solid Dispersions Studied Using Response Surface Methodology, *AAPS PharmSciTech*, 2: E 1 –E 11.
- Rautio^a J, Laine K, Gynther M, and Souvolainen J, 2008. Prodrug Approches for CNS Delivery, *AAPS Journal*, 1: 92-102.
- Rautio^b J, Kumpulainen H, Heimbach T, Oliyai R, Oh D, Jarvinen T, and Savolainen J, 2008. Prodrugs : design and clinical applications, *Nature*, 7: 255-270.
- Roche EB, 1987. *Bioreversible Carriers in Drug Design, Theory and Application*, Pergamon Press, New York.
- Rogers SJ and Cavazos JE, 2008. *Epilepsy in Pharmacotherapy pathophysiologic approach* (Dipiro J.T Ed), 7th Ed, Mc. Graw Hill Co. Inc, Toronto, 927-952.
- Rustichelli C, Gamberini G, Ferioli V, Gamberini MC, Ficarra R and Tommasini S, 2000. Solid-state study of polymorphic drugs: carbamazepine. *J Pharm and Biomed Anal.*, 23(1): 41-54.
- Santos CR, Capela R, Pereira CSGP, Valente E, Gouveia L, Pannecouque C, Clerq ED, Moreira R and Gomes P, 2009. Structure-activity relationships for dipeptide prodrugs of acyclovir : Implications for prodrug design, *Eur. J. Med. Chem*, 44: 2239-2346.
- Savolainen M, Kogermann K, Heinz A, Aaltonen J, Peltonen L, Strachan C and Yliruusi J, 2009., Better understanding of dissolution behavior of amorphous drugs by in situ solid state analysis using Raman spectroscopy, *Eur J. Pharm. and Biopharm*, 71: 71-79.
- Šehić, Selma. 2008. Investigation of Variability of Primary Materials on the Intrinsic Dissolution Behavior of Carbamazepine, *Dissertation*, University of Basel Switzerland.
- Shargel L, Wu-Pong S and Yu ABC, 2005. *Applied Biopharmaceutics and Pharmacokinetics*, 5th Ed. , The McGraw Hill Companies, Boston, 371-391, 411-418.
- Sinko P and Singhy, 2011. *Martin's Physical Pharmacy and Pharmaceutical Sciences : Physical Chemical and Biopharmaceutics Principles in the Pharmaceutical Sciences*, 6th Ed, Lippincott Wilians & Wilkins.
- Shikhar A., Mommana MM, Gupta SS, Squilante E, 2011. Formulation development of Carbamazepine-Nicotinamide co-crystals complexed with γ -cyclodextrin using supercritical fluid process, *J.supercrit Fluids*, 55(3): 1070-1078.

- SII Nanotech, DSC Measurement of Pharmaceuticals-Crystal Polymorphs and Crystallinity, URL. <http://www.sint.com>, diakses tanggal 2 April 2013.
- Stella VJ, 1995. A Case for Prodrugs : Fosphenytoin, *Advanced Drug Delivery Reviews*, 19: 311-330.
- Stella VJ and Nti-Addae KW, 2007. Prodrug strategies to overcome poor water solubility, *Adv. Drug Dev. Rev.*, 59: 677-694.
- Stella VJ, Borchard RT, Hagoman MJ, 2007. *Prodrugs : Challenges and Rewards*, Part 1, APPS Press, 135-140.
- Stegemann S, Leveiller F, Franchi D, de jong H, Linden H, 2007. When poor solubility becomes an issue : From early stage to proof of concept, *Eur J. Pharm Sci*, 31: 249-261.
- Steingrimsdottir H, Gruber A, Palm C, Grimfors G, Kalin M and Eksborg S, 2000. Bioavailability of Acyclovir after Oral Administration of Acyclovir and Its Prodrug Valaciclovir to patients with Leukopenia after Chemotherapy, *J. Antimicrob Agents Chemother*, 44 (1): 207-209.
- Supranto J, 2000. *Teknik Sampling untuk Survei dan Eksperimen*, Rineka Cipta, Jakarta, 35-72.
- Suwaldi M, 1987. Low Melting Phenytoin Prodrugs : In Vitro and In Vivo Correlations, *Dissertation*, The University of Kansas, USA.
- Sweetman and Sean C. 2009. *Martindale The Complete Drug Reference*, 36th Ed.,: Pharmaceutical Press, London, 471-477.
- United States Pharmacopeial Convention, 2009. *Validation of Compendial Procedures in USP 32 NF 27*. United States Pharmacopeial Convention, 733.
- Waterbeemd H and Testa B, 2009. *Drug Bioavailability*, 2nd Completely Revised Ed. Wiley-VCH Verlag GmbH & Co, Weinheim.
- Yawkolsky SH, 1981. *Techniques of Solubilization of Drug*, Marcel Dekker Inc, New York, 183-211.
- Zinelaabidine C, Souad O, Zoubir J, Malika B and Nour-Eddine A, 2012. A Simple and Efficient Method for Deprotection of N-Boc in Various Structurally Diverse Amines under Water-mediated Catalyst-free Condition, *Int. J Chem.*, 4 (3): 73-79.