

DAFTAR PUSTAKA

- Akhtar, N., Rehman, M., Khan, H., Rasool, F., Saeed, T., dan Murtaza, G., 2011. Penetration Enhancing Effect of Polysorbate 20 and 80 on the In Vitro Percutaneous Absorption of LAscorbic Acid. *Tropical Journal of Pharmaceutical Research*, **10**: 281–288.
- Alauddina, M., Islama, J., Shirakawaa, H., Kosekib, T., Ardiansyahc, dan Komaia, M., 2017. Rice Bran as a Functional Food: An Overview of the Conversion of Rice Bran into a Superfood/Functional Food. *Superfood and Functional Food - An Overview of Their Processing and Utilization*, .
- Alverina, A.C., 2016. Formulasi SNEDDS (Self-Nanoemulsifying Drug Delivery System) Beta Karoten Menggunakan Minyak Zaitun (*Olea europaea*). *Skripsi*, Fakultas Farmasi UGM, Yogyakarta.
- Amala, F.K., Boby, J.G., Jeny, S., Vinod, B., dan Sunil, C., 2017. A Review on Self Emulsifying Nanoemulsion. *Journal of Pharmaceutical Research*, **1**: 1–17.
- Anton, N. dan Vandamme, T.F., 2009. The Universality of Low-Energy Nano-Emulsification. *International Journal of Pharmaceutics*, **377**: 142–147.
- Bajpai, P., 2015. Pulp and Paper Chemicals, dalam: Bajpai, P. (Editor), *Pulp and Paper Industry*. Elsevier, Amsterdam, hal. 25–273.
- Balakumar, K., Raghavan, C.V., Selvan, N.T., Prasad, R.H., dan Abdu, S., 2013. Self Nanoemulsifying Drug Delivery System (SNEDDS) of Rosuvastatin Calcium: Design, Formulation, Bioavailability and Pharmacokinetic Evaluation. *Colloids and Surfaces B: Biointerfaces*, **112**: 337–343.
- Ball, G.F.M., 2004. *Vitamins: Their Role in the Human Body*. Blackwell Publishing, London.
- Belhadj, Z., Zhang, S., Zhang, W., dan Wang, J., 2013. Formulation Development and Bioavailability Evaluation of a Self-nanoemulsifying Drug Delivery System (SNEDDS) of Atorvastatin Calcium. *International Journal of Pharmaceutics*, **29**: 1103–1113.
- Brown, C.K., Friedel, H.D., Barker, A.R., Buhse, L.F., Keitel, S., Cecil, T.L., dkk., 2011. FIP/AAPS Joint Workshop Report: Dissolution/In Vitro Release Testing of Novel/Special Dosage Forms. *Indian Journal of Pharmaceutical Sciences*, **73**: 338–353.

- Cerqueira, E.M.M., Meireles, J., Lopes, M., Rocha, V., Gomes-Filho, I., Trindade, S., dkk., 2008. Genotoxic Effects of X-rays on Keratinized Mucosa Cells During Panoramic Dental Radiography. *Dento Maxillo Facial Rdateadiology*, **37**: 398–403.
- Dash, S., Murthy, P.N., Nath, L., dan Chowdhury, P., 2010. Kinetic Modeling on Drug Release from Controlled Drug Delivery Systems. *Acta Poloniae Pharmaceutica*, **67**: 217–223.
- Date, A.A., Desai, N., Dixit, R., dan Nagarsenker, M., 2010. Self-Nanoemulsifying Drug Delivery Systems: Formulation Insights, Applications and Advances. *Nanomedicine (London, England)*, **5**: 1595–1616.
- Day, R.A. dan Underwood, A.L., 2002. *Analisis Kimia Kuantitatif*, 6th ed. Erlangga, Jakarta.
- Deshmane, S.V., Channawar, M., Chandewar, A.V., Biyani, K.R., dan Wadhvani, P., 2009. Chitosan Based Sustained Release Mucoadhesive Buccal Patches Containing Verapamil HCl. *International Journal of Pharmacy and Pharmaceutical Sciences*, **1**: 216–229.
- Divyen, S., Gaud, R.S., Misra, A.N., dan Parikh, R., 2010. Formulation of A Water Soluble Mucoadhesive Film of Lycopene for Treatment of Leukoplakia. *International Journal of Pharmaceutical Sciences Review and Research*, **2**: 6–10.
- El-Malah, Y., Nazzal, S., dan Khanfar, N.M., 2006. D-Optimal Mixture Design: Optimization of Ternary Matrix Blends for Controlled Zero-Order Drug Release From Oral Dosage Forms. *Drug Development and Industrial Pharmacy*, **32**: 1207–1218.
- Elsheikh, M.A., Elnaggar, Y.S.R., Gohar, E.Y., dan Abdallah, O.Y., 2012. Nanoemulsion Liquid Preconcentrates for Raloxifene Hydrochloride: Optimization and In Vivo Appraisal. *International Journal of Nanomedicine*, **7**: 3787–3802.
- Ermacasia, D.A., 2016. Formulasi SNEDDS (Self-Nanoemulsifying Drug Delivery System) Beta Karoten dengan Menggunakan Minyak Jagung (Corn Oil). *Skripsi*, Fakultas Farmasi UGM, Yogyakarta.
- FDA, 2015. GRAS Substances (SCOGS) Database - Select Committee on GRAS Substances (SCOGS) Opinion: Carotene (beta-carotene)', *WebContent*, URL: <http://wayback.archive-it.org/7993/20171031063927/https://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/SCOGS/ucm261245.htm> (diakses tanggal 25/2/2019).

- Gershanik, T. dan Benita, S., 2000. Self-Dispersing Lipid Formulations for Improving Oral Absorption of Lipophilic Drugs. *European Journal of Pharmaceutics and Biopharmaceutics*, **50**: 179–188.
- Grune, T., Lietz, G., Palou, A., Ross, A.C., Stahl, W., Tang, G., dkk., 2010. β -Carotene Is an Important Vitamin A Source for Humans¹²³. *The Journal of Nutrition*, **140**: 2268S-2285S.
- Gunawan, E., 2009. Profil Peningkatan Recovery pada Proses Pembuatan Beta-Karoten dari Minyak Sawit Kasar dengan Metode Pengulangan Fraksinasi Pelarut. *Skripsi*, Departemen Ilmu dan Teknologi Pangan Fakultas Teknologi Pertanian IPB, Bogor.
- Gurpreet, K. dan Singh, S.K., 2018. Review of Nanoemulsion Formulation and Characterization Techniques. *Indian Journal of Pharmaceutical Sciences*, **80**: 781–789.
- Hasani, F., Pezeshki, A., dan Hamishehkar, H., 2015. Original Research Article Effect of Surfactant and Oil Type on Size Droplets of Betacarotene-Bearing Nanoemulsions. *Int.J.Curr.Microbiol.App.Sci*, **4**: 146–155.
- Hashemi, M., Ramezani, V., Seyedabadi, M., Ranjbar, A.M., Jafari, H., Honarvar, M., dkk., 2017. Formulation and Optimization of Oral Mucoadhesive Patches of Myrtus Communis by Box Behnken Design. *Advanced Pharmaceutical Bulletin*, **7**: 441–450.
- Hay, J.N. dan Laity, P.R., 2000. Observations of Water Migration During Thermoporometry Studies of Cellulose Films. *Polymer*, **41**: 6171–6180.
- Huete, A.R., 2004. Remote Sensing for Environmental Monitoring, dalam: Artiola, J.F., Pepper, I.L., dan Brusseau, M.L. (Editor), *Environmental Monitoring and Characterization*. Academic Press, Burlington, hal. 183–206.
- Hurst, W.J., 2002. *Methods of Analysis for Functional Foods and Nutraceuticals*. CRC Press, Florida.
- Ikram, M., Gilhotra, N., dan Gilhotra, R.M., 2015. Formulation and Optimization of Mucoadhesive Buccal Patches of Losartan Potassium by Using Response Surface Methodology. *Advanced Biomedical Research*, **4**: 239.
- Jones, D.S., 2008. *Pharmaceutics - Dosage Form and Design*. Pharmaceutical Press, London; Chicago.
- Karpanen, T., Worthington, T., Conway, B., Hilton, A., S J Elliott, T., dan Lambert, P., 2008. Penetration of Chlorhexidine into Human Skin. *Antimicrobial Agents and Chemotherapy*, **52**: 3633–6.

- Krinsky, N.I. dan Johnson, E.J., 2005. Carotenoid Actions and Their Relation to Health and Disease. *Molecular Aspects of Medicine*, **26**: 459–516.
- Kumar, R.S., Syamala, U.S., Revathi, S.D.P., dan Raghuvver, P., 2013. Self Nanoemulsifying Drug Delivery System of Olanzapine for Enhanced Oral Bioavailability: In vitro, In Vivo Characterisation and In Vitro -In Vivo Correlation. *Journal of Bioequivalence & Bioavailability*, **5**: 201–208.
- Lahoti, S.S., Shep, S.G., Mayee, R.V., dan Toshniwal, S.S., 2011. Mucoadhesive Drug Delivery System: A Review. *Indo-Global Journal of Pharmaceutical Sciences*, **1**: 243–251.
- Makadia, H.A., Bhatt, A.Y., Parmar, R.B., Paun, M.J.S., dan Tank, H.M., 2013. Self-nano Emulsifying Drug Delivery System (SNEDDS): Future Aspects. *Asian Journal of Pharmaceutical Research*, **3**: 20–26.
- Martin, A., Bustamante, P., dan Chun, A.H.C., 1993. *Physical Pharmacy: Physical Chemical Principles in the Pharmaceutical Sciences*, 4th Edition. ed. Lea and Febiger, Philadelphia.
- Maulina, A., 2017. Optimasi Komposisi VCO (Virgin Coconut Oil), Tween 80, dan PEG 400 dalam Formulasi SNEDDS (Self-Nanoemulsifying Drug Delivery System) Beta Karoten. *Skripsi*, Fakultas Farmasi UGM, Yogyakarta.
- Maurya, N.K. dan Kushwaha, R., 2018. Pharmacognosy of Rice Bran Oil - A Review. *International Journal of Green Pharmacy*, **12**: 784–789.
- Mitul, P., Asif, K., Pratik, S., M.V., R., dan Ashwini, D., 2011. Buccal Drug Delivery System: The Current Interest. *International Research Journal of Pharmacy*, **2**: 4–11.
- Mohsin, K., Alamri, R., Ahmad, A., Raish, M., Alanazi, F.K., dan Hussain, M.D., 2016. Development of Self-Nanoemulsifying Drug Delivery Systems for the Enhancement of Solubility and Oral Bioavailability of Fenofibrate, A Poorly Water-Soluble Drug. *International Journal of Nanomedicine*, **11**: 2829–2838.
- Mueller, L. dan Boehm, V., 2011. Antioxidant Activity of β -carotene Compounds in Different In Vitro Assays. *Molecules*, **16**: 1055–1069.
- Ng, S.-F., Rouse, J.J., Sanderson, F.D., Meidan, V., dan Eccleston, G.M., 2010. Validation of a Static Franz Diffusion Cell System for In Vitro Permeation Studies. *AAPS PharmSciTech*, **11**: 1432–1441.
- Nugroho, A.K., 2013. *Sediaan Transdermal: Solusi Masalah Terapi Obat*. Pustaka Pelajar, Yogyakarta.

- Nurdianti, L., Aryani, R., dan Indra, 2017. Formulasi dan Karakterisasi SNE (Self Nanoemulsion) Astaxanthin dari *Haematococcus pluvialis* sebagai Super Antioksidan Alami. *Jurnal Sains Farmasi & Klinis*, **4**: 30–36.
- Nurmiah, S., Syarief, R., Sukarno, Peranginangin, R., dan Nurtama, B., 2013. Aplikasi Response Surface Methodology Pada Optimalisasi Kondisi Proses Pengolahan Alkali Treated Cottonii (ATC). *JPB Kelautan dan Perikanan*, 9–22.
- Parmar, N., Singla, N., Amin, S., dan Kohli, K., 2011. Study of Cosurfactant Effect on Nanoemulsifying Area and Development of Lercanidipine Loaded (SNEDDS) Self Nanoemulsifying Drug Delivery System. *Colloids and Surfaces B: Biointerfaces*, **86**: 327–338.
- Patel, J., Kevin, G., Patel, A., Raval, M., dan Sheth, N., 2011. Design and Development of A Self-Nanoemulsifying Drug Delivery System for Telmisartan for Oral Drug Delivery. *International Journal of Pharmaceutical Investigation*, **1**: 112–118.
- Patel, M. dan Naik, S., 2004. Gamma-Oryzanol from Rice Bran Oil-A Review. *Journal of Scientific and Industrial Research*, **63**: 569–578.
- Pendekal, M.S. dan Tegginamat, P., 2012. Formulation and Evaluation of A Bioadhesive Patch for Buccal Delivery of Tizanidine. *Acta Pharmaceutica Sinica B*, **2**: 318–324.
- Puratchikody, A., Prasanth, V.V., Mathew, S.T., dan Kumar, B.A., 2011. Development and characterization of mucoadhesive patches of salbutamol sulfate for unidirectional buccal drug delivery. *Acta Pharmaceutica (Zagreb, Croatia)*, **61**: 157–170.
- Qian, C., Decker, E.A., Xiao, H., dan McClements, D.J., 2012. Nanoemulsion Delivery Systems: Influence of Carrier Oil on β -Carotene Bioaccessibility. *Food Chemistry*, **135**: 1440–1447.
- Reddy, S., 2011. *Essentials of Clinical Periodontology & Periodontics*, Third Edition. ed. Jaypee Brothers Medical PublishersLtd, New Delhi, India.
- Rowe, R.C., Sheskey, P.J., dan Quinn, M.E. (Editor), 2009. *Handbook of Pharmaceutical Excipients*, Sixth Edition. ed. Pharmaceutical Press, London.
- Roy, Ss.K. dan Prabhakar, B., 2010. Bioadhesive Polymeric Platforms for Transmucosal Drug Delivery Systems – A Review. *Tropical Journal of Pharmaceutical Research*, **9**: 91–104.

- Salvo, P., Smajda, R., Dini, V., Saxby, C., Voirin, G., Romanelli, M., dkk., 2016. A D-Optimal Design to Model the Performances of Dressings and Devices for Negative Pressure Wound Therapy. *Journal of Tissue Viability*, **25**: 83–90.
- Semalty, M., Semalty, A., dan Kumar, G., 2008. Formulation and Characterization of Mucoadhesive Buccal Films of Glipizide. *Indian Journal of Pharmaceutical Sciences*, **70**: 43–48.
- Setya, S., Talegaonkar, S., dan Razdan, B.K., 2014. Nanoemulsions: Formulation Methods and Stability Aspects. *World Journal of Pharmacy and Pharmaceutical Sciences*, **3**: 2214–2228.
- Setyawan, E.I. dan Nugroho, A.K., 2013. Pengaruh Kombinasi Polimer Hidroksipropil Metilselulosa dan Metilselulosa Terhadap Karakter Fisik, Profil Pelepasan dan Transpor Ketoprofen dari Matriks Patch Transdermal. *Tesis*, Universitas Gadjah Mada, Yogyakarta.
- Shah, P., Bhalodia, D., dan Shelat, P., 2010. Nanoemulsion: A Pharmaceutical Review. *Systematic Reviews in Pharmacy*, **1**: 24.
- Shantiningsih, R.R., 2014. Patch Gingiva Mukoadesif β -Carotene sebagai Pencegah Efek Samping Paparan Radiografi Panoramik (Kajian In Vivo pada Kelinci Galur New Zealand). *Disertasi*, Fakultas Kedokteran Gigi UGM, Yogyakarta.
- Shantiningsih, R.R. dan Diba, S.F., 2015. Efek Aplikasi Patch Gingiva Mukoadesif β -Carotene Akibat Paparan Radiografi Panoramik. *Majalah Kedokteran Gigi Indonesia*, **1**: 186–192.
- Sinaga, R.F., Lukitaningsih, E., dan Martien, R., 2015. Formulasi Nanoemulgel Ekstrak Meniran (*Phyllanthus niruri* Linn.) Menggunakan Rice Bran Oil (RBO), Tween 80, dan PEG 400 sebagai Antioksidan dan Tabir Surya. *Skripsi*, Universitas Gadjah Mada.
- Singh, Y., Meher, J.G., Raval, K., Khan, F.A., Chaurasia, M., Jain, N.K., dkk., 2017. Nanoemulsion: Concepts, Development and Applications in Drug Delivery. *Journal of Controlled Release: Official Journal of the Controlled Release Society*, **252**: 28–49.
- Station, B.F., 2005. *Official Methods of Analysis Association of Official Analytical Chemists*. AOAC International, Washington.
- Thakur, A., Walia, M.K., dan Kumar, S.L.H., 2013. Nanoemulsion in Enhancement of Bioavailability of Poorly Soluble Drugs: A Review. *Pharmacophore*, **4**: 15–25.

- USP Convention, 2006. *United States Pharmacopeia and National Formulary*. United States Pharmacopeial Convention, Incorporated, University of Chicago.
- Vijayan, V., Sumanth, M.H., Suman, L., Vinay, T., Srinivasrao, D., dan Kumar, K.J., 2010. Development and Physiochemical, In-Vitro Evaluation of Antihypertensive Transdermal Patches. *Journal of Pharmaceutical Sciences and Research*, **2**: 171–177.
- Washington, N., Washington, C., dan Wilson, C., 2001. *Physiological Pharmaceutics: Barriers to Drug Absorption*, Second Edition. ed. CRC Press, London.
- Watanabe, P., Watanabe, A., Faria, V., dan Camargo, A., 2017. Journal of Oral Health and Dental Care Multiple Radiographic Analysis (Systemic Disease): Dental Panoramic Radiography. *Journal of Oral Health and Dental Care*, **1**: 007.
- Yadav, Anuj, Kumari, R., Yadav, Ashwani, Mishra, J.P., Srivatva, S., dan Prabha, S., 2016. Antioxidants and Its Functions In Human Body - A Review. *Research in Environment and Life Sciences*, 1328–1331.
- Yadav, V.K., Gupta, A.B., Kumar, R., Yadav, J.S., dan Kumar, B., 2010. Mucoadhesive Polymers: Means of Improving the Mucoadhesive Properties of Drug Delivery System. *Journal of Chemical and Pharmaceutical Research*, **2**: 418–432.
- Yeom, D.W., Song, Y.S., Kim, S.R., Lee, S.G., Kang, M.H., Lee, S., dkk., 2015. Development and Optimization of A Self-Microemulsifying Drug Delivery System for Atorvastatin Calcium by Using D-Optimal Mixture Design. *International Journal of Nanomedicine*, **10**: 3865–3877.
- Zhang, Y., Huo, M., Zhou, J., Zou, A., Li, W., Yao, C., dkk., 2010. DDSolver: An Add-In Program for Modeling and Comparison of Drug Dissolution Profiles. *The AAPS Journal*, **12**: 263–271.