

DAFTAR PUSTAKA

- Depkes RI, 1995, *Farmakope Indonesia*, Edisi IV, 112, Departemen Kesehatan Republik Indonesia, Jakarta.
- Athikomkulchai, S., Vayumhasuwan, W., Tunvichen, S., Piyapong S., Malaipuang, S., dan Ruangrunsi, 2007, The Development of Sunscreen Products from *Kaempferia galanga*, *Journal of Health Research.*, **21** (4), 253-256.
- Badolato, B., Aguilar, F., Schuchmann, H.P., Sobisch, T., dan Lerche, D., 2008, Evaluation of Long Term Stability of Model Emulsions by Multisample Analytical Centrifugation, *Progress in Colloid and Polymer Science*, **134**, 66-73.
- Baser, K.H.C. dan Buchbauer, G., 2010, *Essential Oils: Science, Technology, and Applications*, 153, CRC Press, London.
- Betageri, G. dan Prabhu, S., 2002, Semisolid Preparation, dalam Swarbrick, J., Boylan, J.C., (Eds.), *Encyclopedia of Pharmaceutical Technology*, 2nd Ed., 2436, 2453-2456, Marcel Dekker Inc., New York.
- Bhuiyan, N.I, Begum, J., dan Anwar, M.N, 2008, Essential Oils of Leaves and Rhizomes of *Kaempferia galanga* Linn., *Journal of Biological Sciences*, **3** (2), 65-76.
- Bilia, A.R., Guccione, C., Isacchi, B., Righeschi, C., Firenzuoli, F., dan Bergonzi, M.C., 2014, Essential Oils Loaded in Nanosystems: A Developing Strategy for A Successful Therapeutic Approach, *Evidence-Based Complementary Alternative Medicine*, 1-14.
- Björn, A., de La Monja, P.S., Karlsson, A., Ejlertsson, J., dan Svensson, B.H., 2012, Rheological Characterization, *InTech*, **3**, 63-76.
- Board, N., 2003, *The Complete Technology Book of Essential Oils (Aromatic Chemicals)*, 312, Asia Pacific Business Press Inc., New Delhi.
- Bolton, S., 1997, *Pharmaceutical Statistics Practical and Clinical Application*, 3rd Ed., 610-613, Marcel Dekker Inc., New York.
- Chen, R.H. dan Heh, R.S., 1999, Effects and Physico-Chemical Properties of Sun Screen Lotion Containing Water-Soluble Chitosan, *Journal Applied Cosmetology*, **17**, 56-71.
- de Alvarenga, E.S., 2011, Characterization and Properties of Chitosan, dalam Elnashar, M., (Ed.), *Biotechnology of Biopolymers*, 91-103, InTech, Kroasia.
- Diffey, B.L., 2002, What Is Light?, *Photodermatology Photoimmunology Photomedicine*, **18**, 68-74.

- Drakaki, E., Dessinioti, C., dan Antoniou, C.V., 2014, Air Pollution and The Skin, *Frontiers in Environmental Science*, **2** (11), 1-6.
- Dutra, E.A., Oliveira, A.A.G., Hackmann, E.R.M.K., dan Santoro, M.I.R.M., 2004, Determination of Sun Protection Factor (SPF) of Sunscreens by Ultraviolet Spectrophotometry, *Brazilian Journal of Pharmaceutical Science*, **40** (3), 381-385.
- Elya, B., Dewi, R., dan Budiman, M.H., 2013, Antioxidant Cream of *Solanum lycopersicum* L., *International Journal of PharmTech Research*, **5** (1), 233-238.
- Foti, M.C., Daquino, C., dan Geraci, C., 2003, Electron-Transfer Reaction of Cinnamic Acid and Their Methyl Esters with the DPPH Radical in Alcoholic Solutions, *Journal of Organic Chemistry*, **69**, 2309-2314.
- Gandjar, I.G. dan Rohman, A., 2007, *Kimia Farmasi Analisis*, 255-256, Pustaka Pelajar, Yogyakarta.
- Garg, A., Aggarwal, D., Garg, S., dan Singla, A.K., 2002, Spreading of Semisolid Formulations, *Pharmaceutical Technology*, 84-105.
- González, S., Fernández-Lorente, M., dan Gilaberte-Calzada, Y., 2008, The Latest on Skin Photoprotection, *Clinics in Dermatology*, **26**, 614-626.
- Guenther, E., 1948, *The Essential Oils*, Vol. 1, 236-275, Litton Educational Publishing Inc., New York.
- Guglielmini, G., 2008, Nanostructured Novel Carrier for Topical Application, *Clinics in Dermatology*, **26**, 341-346.
- Gupta, P.K., Pandit, J.K., Kumar, A., Swaroop, P., dan Gupta, S., 2010, Pharmaceutical Nanotechnology Novel Nanoemulsion-High Energy Emulsification Preparation, Evaluation and Application, *The Pharma Research*, **3**, 117-138.
- Hamblin, M.R. dan Huang, Y., 2013, *Handbook of Photomedicine*, 134-135, CRC Press, Florida.
- Hamid, A.A., Aiyelagbe, O.O., Usman, L.A., Ameen, O.M., dan Lawal, A., 2010, Antioxidants: Its Medicinal and Pharmacological Applications, *African Journal of Pure and Applied Chemistry*, **4** (8), 142-151.
- Haritha, A., Syed, P.B., Koteswara, R.P., dan Chakravarthi, V., 2013, A Brief Introduction to Method of Preparation, Applications and Characterization of Nanoemulsion Drug Delivery System, *Indian Journal of Research in Pharmacy and Biotechnology*, **1** (1), 25-28.
- Hassan, I., Dorjay, K., dan Sami, A.A., 2013, Sunscreens and Antioxidants as Photoprotective Measures: An Update, *Our Dermatology Online*, **4** (3), 369-374.

- Huang, D., Ou, B., dan Prior, R.L., 2005, The Chemistry behind Antioxidant Capacity Assays, *Journal of Agricultural and Food Chemistry*, **53** (6), 1841-1856.
- Iwata, H. dan Shimada, K., 2012, *Formulas, Ingredients and Production of Cosmetics*, 90, Springer, Tokyo.
- Jain, K., Kumar, R.S., Sood, S., dan Gowthamarajan, K., 2013, Enhanced Oral Bioavailability of Atorvastatin Via Oil-in-Water Nanoemulsion Using Aqueous Titration Method, *Journal of Pharmaceutical Sciences and Research*, **5** (1), 18-25.
- Jansen, J., 2010, Encapsulation to Deliver Topical Actives, dalam Barel, A.O., Paye, M., dan Maibach, H.I., (Eds.), *Handbook of Cosmetic Science and Technology*, 3rd Ed., 788-791, CRC Press, Florida.
- Khan, B.A., Akhtar, N., Khan, H.M.S., Waseem, K., Mahmood, T., Rasul, A., dkk., Kumar, A., 2014, Chemical Composition of Essential Oil Isolated from Rhizomes of *Kaempferia* 2011, Basics of Pharmaceutical Emulsions: A Review, *African Journal Pharmacy and Pharmacology*, **5**, 2715-2725.
- Kumar, P.T.P., Prakash, N.K.S., Lokesh, P., dan Manral, K., 2015, A Simple and Rapid Method Developed to Determine The Sun Protection Factor (SPF) by Using UV-Visible Spectrophotometer for Topical Formulations, *Journal of Research dan Method in Education*, **5** (3), 1-5.
- Kumar, A., 2014, Chemical Composition of Essential Oil Isolated from Rhizomes of *Kaempferia galanga* L., *International Journal of Pharma and Bio Sciences*, **5** (1), 225- 231.
- Kumar, M.N.V., Muzzarelli, R. A. A., Muzzarelli, C., Sashiwa, H., dan Domb, A. J., 2004, Chitosan Chemistry and Pharmaceutical Perspectives, *Chemical Reviews*, **104** (12), 6017-6084.
- Kumar, M.N.V., 2000, A Review of Chitin and Chitosan Application, *Reactive and Functional Polymers*, **46**, 1-27.
- Lachman, L., Lieberman, H.A., dan Kanig, J.L., 1994, *Teori dan Praktek Farmasi Industri*, Edisi III, diterjemahkan oleh S. Suyatmi, 1034, 1091 - 1093, 1105, UI-Press, Jakarta.
- Lambers, H., Piessens, S., Bloem, A., dan Finkel, P., 2006, Natural Skin Surface pH is on Average below 5, Which is Beneficial for Its Resident Flora, *International Journal of Cosmetic Science*, **28** (5), 359-370.
- Leopoldini, M., Marino, T., Russo, N., dan Toscano, M., 2004, Antioxidant Properties of Phenolic Compounds: H-Atom versus Electron Transfer Mechanism, *Journal of Physical Chemistry*, **108**, 4916-4922.

- Lü, M., Lin, P.H., Yao, Q., dan Chen, C., 2010, Chemical and Molecular Mechanism of Antioxidants: Experimental Approaches and Model Systems, *Journal of Cellular and Molecular Medicine*, **14** (4), 840-860.
- Maharani, I., 2013, Formulasi dan Uji Transpor secara *In Vitro* Mikroemulsi Transdermal Ketoprofen Menggunakan *Virgin Coconut Oil* sebagai Fase Minyak, *Tesis*, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Mahdi, E.S., Noor, A.M., Sakeena, M.H., Abdullah, G.Z., Abdulakarim, M.F., dan Sattar, M.A., 2011, Formulation and *In Vitro* Release Evaluation of Newly Synthesized Palm Kernel Oil Esters-Based Nanoemulsion Delivery System for 30% Ethanolic Dried Extract Derived From Local *Phyllanthus urinaria* for Skin Antiaging, *International Journal of Nanomedicine*, **6**, 2499-2512.
- Mailer, R., 2006, Chemistry and Quality of Olive Oil, *Primefact*, **227**, 1-4.
- Malvern, 2015, Dynamic Light Scattering Common Terms Defined, <http://www.malvern.com>, 24 Mei 2015.
- Mansur, J.S., Breder, M.N.R., Mansur, M.C.A., dan Azulay, R.D., 1986, Determination of Sun Protection Factor by Spectrofotometry, *Journal Brazilian Annals of Dermatology*, **61**, 121-124.
- Mason, T.G., Wilking, J.N., Melson, K., Chang, C.B., dan Graves, S.M., 2006, Nanoemulsion: Formation, Structure, and Physical Properties, *Journal of Physics*, **18**, 635-666.
- Matsui, M.S., Hsia, A., Miller, J.D., Hanneman, K., Scull, H., Cooper, K.D., dan Baron, E., 2009, Non-Sunscreen Photoprotection: Antioxidant Add Value to a Sunscreen, *Journal of Investigative Dermatology Symposium Proceedings*, **14**, 56-59.
- Matsumura, Y. dan Ananthaswamy, H.N., 2004, Toxic Effects of Ultraviolet Radiation on the Skin, *Toxicology and Applied Pharmacology*, **195** (3), 298-308.
- Mitsui, T., 1997, *New Cosmetic Science*, 195-196, Elsevier Science B.V., Amsterdam.
- Mollet, H. dan Grubenmann, A., 2001, *Formulation Technology: Emulsion, Suspension, Solid Forms*, 177, Wiley-Vch, Toronto.
- Ngo, D. dan Kim, S., 2014, *Antioxidant, Antimicrobial Properties of Chitin, Chitosam and Their derivatives*, 214-215, CRC Press, Busan.
- Odriozola-Serrano, I., Oms-Oliu, G., dan Martín-Belloso, O., 2014, Nanoemulsion-Based Delivery Systems to Improve Functionality of Lipophilic Components, *Frontiers and Nutrition*, **1** (24), 1-4.

- Pardede, E.M., 2014, Formulasi dan Uji Aktivitas Tabir Surya dan Antioksidan Krim O/W Nanokitosan, *Skripsi*, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Patel, H.C., Parmar, G., Seth, A.K., Patel, J.D., dan Patel, S.R., 2013, Formulation and Evaluation of O/W Nanoemulsion of Ketoconazole, *International Journal of Pharmaceutical Sciences*, **4** (4), 338-351.
- Pillai, C.K.S., Paul, W., dan Sharma, C.P., 2009, Chitin and Chitosan Polymers: Chemistry, Solubility and Fiber Formation, *Progress in Polymer Science*, **34**, 641-678.
- Poljsak, B., Glavan, U., dan Dahmane, R., 2012, Skin Cancer, Free Radicals and Antioxidants, *International Journal of Cancer Research and Prevention*, **4** (3), 193-217.
- Rinaudo, M., 2006, Chitin and Chitosan: Properties and Application, *Progress in Polymer Science*, **31**, 603-632.
- Rowe, R.C., Sheskey, P. J., dan Owen, S.C., 2009, *Handbook of Pharmaceutical Excipients*, 6th Ed., 155, 156, 283, 301, 466, 624, 630, 794, Pharmaceutical Press, London.
- Sahoo, S., Parida, R., Singh, S., Padhy, R.N., dan Sanghamitra, N., 2014, Evaluation of Yield, Quality and Antioxidant Activity of Essential Oil of in Vitro Propagated *Kaempferia galanga* Linn., *Journal of Acute Disease*, 124-130.
- Sano, T., Kume, T., Fujimura, T., Kawada, H., Moriwaki, S., dan Takema, Y., 2005, Formation of Wrinkles Caused by Transition of Keratin Intermediate Filaments After Repetitive UVB Exposure, *Archives of Dermatological Research*, **296**, 359-365.
- Saraswathi, B., Balaji, A., dan Umashankar, M.S., 2013, Polymers in Mucoadhesive Drug Delivery System-Lates Updates, *International Journal of Pharmacy and Pharmaceutical Sciences*, **5** (3), 423-430.
- Sayre, R.M., Agin, P.P., LeVee, G.J., dan Marlowe, E., 1979, A Comparison of In Vitro and In Vitro Testing of Sunscreening Formulas, *Journal of Photochemistry and Photobiology*, **29** (3), 559-66.
- Shah, V., Howard, I. dan Jenner, J., 2015, *Topical Drug Bioavailability, Bioequivalence, and Penetration*, 394, Springer, New York.
- Sharma, P., 2011, Cinnamic Acid Derivates: A New Chapter of Various Pharmacological Activities, *Journal of Chemical and Pharmaceutical Research*, **3** (2), 403-423.

- Shindo, Y., Witt, E., dan Packer, L., 1993, Antioxidant Defense Mechanism in Murine Epidermis and Dermis and Their Responses to Ultraviolet Light, *Journal of Investigative Dermatology*, **100**, 260-265.
- Sies, H., 1997, Oxidative Stress: Oxidants and Antioxidants, *Journal of Experimental Physiology*, **82** (2), 291–295.
- Singla, A.K. dan Chawla M., 2001, Chitosan: Some Pharmaceutical and Biological Aspects-An Update, *Journal of Pharmacy and Pharmacology*, **53**, 1047-1067.
- So, P., 2008, *Skin Cancer*, 33-6, Chelsea House Publisher, New York.
- Solans, C., Izquierdo, P., Nolla, J., Azemar, N., dan Garcia-Celma, M.J., 2005, Nano-emulsions, *Current Opinion in Colloid dan Interface Science*, **10**, 102–110.
- Sulaiman, T. N. dan Kuswahyuning, R., 2008, *Teknologi dan Formulasi Sediaan Semipadat*, 73, 75, 139, Pustaka Laboratorium Teknologi Farmasi Fakultas Farmasi UGM, Yogyakarta.
- Tadros, T., Izquierdo, P., Esquena, J., dan Solans, C., 2004, Formation and Stability of Nano-Emulsions, *Advances in Colloid and Interface Science*, **108** (109), 303-318.
- Tahrir, I., Jumina, dan Yuliasuti, I., 2002, Analisis Aktivitas Perlindungan Sinar UV secara *In Vitro* dan *In Vivo* dari Beberapa Senyawa Eter Sinamat Produk Reaksi Kondensasi Benzaldehid Tersubstitusi dan Alkilasi, *Makalah Seminar Nasional Kimia XI*, Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Gadjah Mada, Yogyakarta.
- Talegaonkar, S., Tariq, M., dan Abood, R.M., 2011, Design and Development of O/W Nanoemulsion for The Transdermal Delivery of Ondansetron, *World Journal of Pharmacy and Pharmaceutical Sciences*, **3** (12), 1495-1512.
- Tisserand, R. dan Young, R., *Essential Oil Safety*, 2nd Ed., 2013, 10-12, Churchill Livingstone Elsevier, London.
- Vierkötter, A. dan Krutman, J., 2012, Environmental Influences on Skin Aging and Ethnic-Specific Manifestations, *Dermatoendocrinol*, **4** (3), 227-231.
- Voight, R., 1995, *Buku Pelajaran Teknologi Farmasi*, Edisi V, diterjemahkan oleh S.N. Soewandhi, 382-442, Gadjah Mada University Press, Yogyakarta.
- Waris, G. dan Ahsan, H., 2006, Reactive Oxygen Species: Role in the Development of Cancer and Various Chronic Conditions, *Journal of Carcinogenesis*, **5** (14), 1-8.

- Wang, S.Q., Osterwalder, U., dan Jung, K., 2011, *Ex Vivo* Evaluation of Radical Sun Protection Factor in Popular Sunscreen with Antioxidants, *American Academy of Dermatology*, **65** (3), 525-530.
- Widyaningrum, S.A., 2015, Formulasi dan Uji Aktivitas Antimikroba Nanoemulsi Minyak Manis-Jangan (*Cinnamomum burmani* Ness ex. Bl.) terhadap *Pseudomonas aeruginosa* NCTC 12924 dan *Staphylococcus aureus* ATCC 29213, *Skripsi*, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Wihelmina, C.E., 2011, Pembuatan dan Penentuan Nilai SPF Nanoemulsi Tabir Surya Menggunakan Minyak Kencur (*Kaempferia galanga* L.) Sebagai Fase Minyak, *Skripsi*, Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Indonesia, Yogyakarta.
- Wilkinson, J. B. dan Moore, R. J., 1982, *Harry's Cosmeticology*, 7th Ed., 223-224, 226, 231-235, 254, George Godwin, London.
- Windriyati, Y.K., Wahyuningrum, D.P., dan Murukmihadi, M., 2007, Pengaruh Perbedaan Konsentrasi Ekstrak Etanolik Umbi Bengkuang (*Pachyrrhizus erosus* (L.) Urb) dalam Sediaan Krim terhadap Sifat Fisiknya, *Jurnal Ilmu Farmasi dan Farmasi Klinik*, **4** (1), 1-3.
- Wlaschek, M., Tantcheva-Poór, I., Naderi, L., Ma, W., Schneider, L.A., Razi-Wolf, Z., Schüller, J., dan Scharffetter-Kochanek, K., 2001, Solar UV Irradiation and Dermal Photoaging, *Journal of Photochemistry and Photobiology*, **63** (3), 41-51.
- Xie, J. dan Schaich, K.M., 2014, Re-evaluation of the 2,2-Diphenyl-1-picrylhydrazyl Free Radical (DPPH) Assay for Antioxidant Activity, *Journal of Agricultural and Food Chemistry*, **62** (19), 4251-4260.
- Xu, Y., Xu, Y., Zhang, J., dan Xia, W., 2014, Preparation and Characterization of Chitosan-Stearat Complexes and In Vitro Evaluation on The Adsorption of Deoxycholic Acid Salt, *Polymer Engineering and Science*, **54** (3), 592-597.
- Yi, H., Wu, L., Bentley, W.E., Ghodssi, R., Rubloff, G.W., Culver, J.N., dan Payne, G.F., 2005, Biofabrication with Chitosan, *Biomacromolecules*, **6** (6), 2882-2894.
- Zaidi, Z. dan Lanigan, S.W., 2010, *Dermatology in Clinical Practice*, 4rd Eds., Springer-Verlag, London.