

- Allen L. V., Popovich N. G., Ansel H. C., 2010, *Pharmaceutical Dosage Form and Drug Delivery Systems*, Lippincott Williams & Wilkins, Ed.9, Philadelphia.
- Allen, L.V., 2002, *The Art, Science and Technology of Pharmaceutical Compounding* 2nd Edition., 301-312, American Pharmaceutical Association, Washington D.C.
- Almeira, P.D.O., 2016, Optimasi Formula Krim Senyawa Tetrahidropentagamavunon-0 Menggunakan Metode *Simplex Lattice Design*, *Skripsi*, Fakultas Farmasi UGM, Jogjakarta
- Anggraeni, Y., Hendradi, E., dan Purwanti, T., 2012, Karakteristik Sediaan dan Pelepasan Natrium Diklofenak dalam Sistem Niosom dengan Basis Gel Karbomer 940, *Pharma Scientia*, **1** (1), 1-10.
- Anonim, 1986, *Kodeks Kosmetika Indonesia*, Vol.2, Departemen Kesehatan Republik Indonesia, Jakarta.
- Ansel, H.C., Popovich, N.G., & Allen, L.V., 1989, *Pharmaceutical Dosage Form and Drug Delivery System*, 7thEd., 92-97, 107-513, 164-177, 152, 228, Lippincott Williams and Wilkins, Philadelphia.
- Aulton, M. E., 2003, *Pharmaceutics The Science of Dosage Form Design*, Second Edition, 408, ELBS Fonded by British Government.
- Barry, B.W., 1983, *Rheology of Dermatological vehicles. In: Dermatological Formulations. Percutaneous Adbsorbtion*, Marcel Dekker, New York cit Suhaime, I.H.B., Tripathy, M., Mohamed, S.M., dan Majeed, A.B.A., 2012, The Pharmaceutical Application of Carbomer, *AJPSR.*, **2** (2), 1-15.
- Barry, B.W dan Grace, A.J., 1972, Sensory Testing of Spreadability: Investigation of Rheological Conditions Operative During Application of Topical Preparations, *J. Pharm. Sci.*, **61** (3), 335–341 cit Garg, A., Aggarwal, D., Garg, S., Singla, A.K., 2002, Spreading of Semisolid Formulations, *Pharmaceutical Technology.*, 84-105.
- Budimarwanti, C. dan Handayani, S., 2010, Efektivitas Katalis Asam Basa Pada Sintesis 2-hidroksikalkon, Senyawa yang Berpotensi Sebagai Zat Warna. *Jurdik Kimia UNY.*, **1** (1), 1-9.
- Bursac Kovačević, D., Levaj, B., dan Dagović-Uzelac, V., 2009a. Free Radical Scavenging Activity and Phenolic Content in Strawberry Fruit and Jam. *Agriculturae Conspectus Scientificus (ACS)*, **74**: 155–159.
- Bruice, P.Y., 2007, *Organic Chemistry*, Fifth edition, New York
- Cho, S.-D., Park, Y.D., Kim, J.-J., Falck, J.R., dan Yoon, Y.-J., 2004, Facile reduction of carboxylic acids, esters, acid chlorides, amides and nitriles to alcohols or amines using NaBH₄/BF₃· Et₂O. *Bull. Korean Chem. Soc.*, **25**: 407–409

Draelos, Z.D., dan Laurens, A.T., 2006, *Cosmetic Formulation of Skin Care Products*, Taylor dan Francis Group, New York

De Hoffman, E., Charette, J., Stroobant, V., 1996, *Mass Spectrometry: Principles and Applications*, h.99-126, John Wiley and Sons Ltd., UK

De Paula, I.C., Ortega, G.G., Bassani, V.L., dan Petrovick, P.L., 1998, Development of Ointment Formulations Prepared with *Achyrocline satureioides* Spray-Dried Extracts, *Drug Dev. Ind. Pharm.*, **24** (3), 235–241 cit Garg, A., Aggarwal, D., Garg, S., dan Singla, A.K., 2002, Spreading of Semisolid Formulations, *Pharmaceutical Technology*, 84-105.

Djuanda, A., 1999, *Ilmu Penyakit Kulit dan Kelamin*, Edisi II, Fakultas Kedokteran Universitas Indonesia Press, Jakarta

Emerit, I., Packer, L., dan Auclair, C., 1990, *Antioxidants in therapy and preventive medicine*, 533-536, Plenum Press, New York and London.

Fessenden, R.J & J.S. Fessenden, 1992, *Kimia Organik Jilid 2*. Terj. Dari *Organik Chemistry*, oleh Pudjaatmaka, A. H, Jakarta: Erlangga

Gadape, H. H., and Pariks, K. S., 2011, Quantitative determination and Validation of Pioglitazone in Pharmaceutical using Quantitative Nuclear Magnetic Resonance pectroscopy, *J. Chem. Pharm. Res.*, **3** (1), 649-664.

Garg, A., Deepika, A., Sanjay, G., Anil, K.S., 2002, Spreading of Semisolid Formulations An Update, 90, *Pharmaceutical Technology*, USA

Gaur, R., Azizi, M., Gan, J., Hansal, P., Harper, K., Mannan, R., Panchal, A., Patel, K., Patel, M., Patel, N., Rana, J., Rogowska, A., 2008. *British Pharmacopoeia* 2009. (Electronic version).

Gandjar, Ibnu Ghalib dan Abdul R., 2007, *Kimia Farmasi Analisis*, Yogyakarta: Pustaka Pelajar.

Glaser, D.A., 2003. Anti-aging products and cosmeceuticals. *Facial Plastic Surgery Clinics of North America*, **11**: 219–227

Gozali, D., Abdasah, M., Subghana, A., dan Latiefah, S., 2009, Formulasi Krim Pelembab Wajah yang Mengandung Tabir Surya Nanopartikel ZnO Salut Silikon, *Farmaka*, **7(1)**, 37-47.

Guan, Guoqing, Kusakabe, Katsuki, dan Yamasaki, S., 2009, Tri-potassium phosphate as a solid catalyst for biodiesel production from waste cooking oil, *Fuel Processing Technology*, **90**, pp. 520-524.

Halliwell, B dan Gutteridge, G.M.C., 2015, *Free Radicals in Biology and Medicine*, 1-7, Oxford University Press : United Kingdom.

- Hamzah, N., Ismail, I., dan Sandi, A.D.A., 2014, Pengaruh Emulgator Terhadap Aktivitas Antioksidan krim Ekstrak Etanol Kelopak Bunga Rosella (*Hibiscus sabdariffa* Linn). *Jurnal Kesehatan*, **7**: 376-385.
- Hidayatu, H.S., dan Karim, A.Z., 2013, Stabilitas Fisik dan Aktivitas Krim W/O Ekstrak Etanolik Buah Mahkota Dewa (*Phaleria macrocarph*(scheff.)Boerl.) Sebagai Tabir Surya, *Traditional Medicine Journal*, **18**(2), 109-117.
- Helfrich, Y.R, Sachs, D.L., & Vorhees, J.J., 2008, Overview of skin aging and photoaging, *Dermatology Nursing*, **20** (3), 177-183.
- Holzgrabe, U., Diehl, B. W. K., and Wawer, I., 1998, NMR Spectroscopy in Pharmacy, *Journal of Pharmaceutical and Biomedical Analysis*, **17**, 557-616.
- Ilic-Stojanovic, S., Nikolic, L., Nikolic, V., Petrovic, S., Stankovic, M., dan Mladenovic-Ranisavljevic, I., 2011, Stimuli-sensitive hydrogels for pharmaceutical and medical applications. *Facta universitatis - series: Physics, Chemistry and Technology*, **9**: 37–56
- Joenoos, N., 1998, *Ars Prescribendi (Resep Yang Rasional)*, 121-123, Airlangga University Press, Surabaya.
- Khan, M.R.U., Raza, S.M., dan Hussain, M., 2014, Formulation and In-Vitro evaluation of Cream containing Diclofenac Sodium and Curcuma Longa for the Management of Rheumatoid Arthritis. *International Journal of Pharma Sciences*, **4**: 654–660.
- Kim, B dan Peppas, N.A., 2003, In vitro release behavior and stability of insulin in complexation hydrogels as oral drug delivery carriers, *International Journal of Pharmaceutics.*, **266**, 29-37.
- Lachman, L., Lieberman, H., dan Kanig, J., 2007, *The Theory and Practice of Industrial Pharmacy*, I. Washington Square, Philadelphia, USA.
- Lieberman, H.A., Rieger, M.M., & Banker, S.G., 1998, *Pharmaceuticals Dosage Forms: Dipeper System*, 2ndEd., Revised and Expanded, 3- 5, 105- 106, 264-270, 272-276, Marcell Dekker Inc., New York.
- Liu, P., Peng, J., Li, J., dan Wu, J., 2005, Radiation crosslinking of CMC-Na at low dose and its application as substitute for hydrogel, *Radiat. Phys. Chem.*, **72**, 635–638.
- Loden, M., 2009., *Hydrating Substance In Handbook of Cosmetic Science and Technology 3rd Edition.*, 107, New York : Informa Healthcare USA.
- Majeed, M., Badmaev, V., Shivakumar, U., & Rajendran, R., 1995, *Curcuminoids Antioxidant Phutonutrients*, Nitroscience Publishers Inc., Piscataway, New Jersey, 1-24.
- Mazumder, A., N. Neamati, S. Sunder, J. Schultz, H. Pertz, E. Eich, and Y. Pommier. 1997, Curcumin Analogs with Altered Potencies Against HIV-1 Integrase as Probes for Biochemical Mechanisms of Drug Action. *Journal of Medicinal Chemistry*, **40**, 3057-3063.

McMurry, John. 2008, *Organic Chemistry, Sevent Edition*. United State of America: Brooks/Cole, a Division of Thomson Learning

Molyneux, P., 2004, The Use of the Stable Free Radical Diphenylpicryl-hydrazyl (DPPH) for Estimating Antioxidant Activity, *Songlanakaran J. Sci. Technol.*, **26** (2), 211-219

Mukhopadhyay, A., Basu, N., Ghatak, N., dan Gujral, P.K., 1982, Anti-inflammatory and Irritant Activities of Curcumin Analogues in Rats. *Agents and Actions*, **12**: 508–515.

Mulja, M., dan Suharman, 1995, *Analisis Instrumental*, Airlangga University Press, Surabaya.

Niazi, S.K., 2009, *Handbook of Pharmaceutical Manufacturing Formulation 2nd Edition.*, 221, New York, Informa Healthcare USA.

NITZ,. 'Chemistry WebBook', . URL: <http://www.webbook.nist.gov/chemistry/> (diakses tanggal 2/10/2015).

Okada K, Wangpoengtrakul C, Tanaka T, Toyokuni S, Uchida K, Osawa T., 2001, Curcumin and Especially Tetrahydrocurcumin Ameliorate Oxidative Stress-induced Renal Injury in Mice. *J. Nutr.* **31**:2090–2095.

Olivia, H.N., Paulina, V.Y.Y., dan Weny, W., 2013, Pengaruh Basis Salep Terhadap Formulasi Sediaan Salep Ekstrak Daun Kemangi (*Ocimum sanctum* L.) Pada Kulit Punggung Kelinci yang Dibuat Infeksi *Staphylococcus Aureus*, *Pharmacon*, **2(2)**, 27-32.

Osawa, T., Sugiyama, Y., Inayoshi, M., dan Kawakishi, S., 1995, Antioxidative activity of tetrahydrocurcuminoids. *Biosci. Biotech. Biochem.* 59:1609-1612 citOkada, K., Wangpoengtrakul, C., Tanaka, T., Toyokuni, S., Uchida, K., & Osawa, T., 2001, Curcumin and Especially Tetrahydrocurcumin Ameliorate Oxidative Stress-Induced Renal Injury in Mice, *J. Nutr.*, **138** (1), 2090-2095.

Pan, M., Huang, T., and Lin, J., 1999, Biotransformation of Curcumin Through Reduction and Glucuronidation in Mice, *Drug Metab. Dispos.*, **27**, 486-494

Pari L, Murugan P., 2005, Effect of Tetrahydrocurcumin on Blood Glucose, Plasma Insulin and Hepatic Key Enzymes in Streptozotocin Induced Diabetic Rats. *J. Basic Clin. Physiol. Pharmacol.* **16**:257–274.

Parrot, E.L., 1970, *Pharmaceutical Technology Fundamental Pharmaceutics*, Third Ed., 82, Burgess Pub. 6, Mineapolis.

Pavia, D.L., Lampman, G.M., dan Kriz, G.S., 2001, *Introduction to Spectroscopy*, 3rd Edition, Thomson learning, Inc., United States of America, 13-27, 38-44, 59, 63, 81-109, 127-130, 131-138, 146-149.

Paye, M., Andre, O.B., & Howard, I.M., 2001, *Handbook of Cosmetic Science and Technology*, 220-226, Marcell Dekker Inc., New York.

- Peppas, N.A., Bures, P., Leobandung, W., dan Ichikawa, H., 2000, Hydrogels in pharmaceutical formulations. *European journal of pharmaceutics and biopharmaceutics*, **50**: 27–46.
- Pokorný, J., 2003, 3 - Natural antioxidants, dalam: Zeuthen, P. dan Bøgh-Sørensen, L. (Editor), *Food Preservation Techniques, Woodhead Publishing Series in Food Science, Technology and Nutrition*. Woodhead Publishing, hal. 31–48.
- Prasad, R. P., Bhuvaneswari, K., Murarilal, and Rajani, K., 2012, FT-IR Spectroscopic Assay Method for Domperidone in Bulk and tablet Formulations, *International Journal of research in Pharmaceutical and Biomedical Sciences*, **3**(4), 1523-1525.
- Pujimulyani, D., 2003, Pengaruh Bleaching Terhadap Sifat Antioksi dan Sirup Kunir Putih (*Curcuma mangga, Val.*), *Agritech.*, **23** (3), 137-141.
- Reddy, M.S., dan Veerareddy, P.R., 2011, Formulation and evaluation of topical valdecocix gel, *Int J Pharm Pharm Sci.*, **3** (4), 148-152.
- Rasool, B.K.A., Abu-Gharbieh, E., Fahmy, S., Saad, H., dan Khan, S., 2010, Development and evaluation of ibuprofen transdermal gel formulations. *Tropical Journal of Pharmaceutical Research*, **9**, 355-363
- Ritmaleni dan Simbara, A., 2010, Synthesis Tetrahidropentagamavunon-0, *Majalah Farmasi Indonesia*, **21**(2), 100-106.
- Ritmaleni, Sardjiman, Mintariyanti, B., Wulandari, E., dan Purwantini, I., 2013a, Antibacterial Acivity of Tetrahydropentagamavunon-0 (THPGV-0) and Tetrahydropentagamavunon-1 (THPGV-1). *Journal of Natural Sciences Research*, **3**: 12–18.
- Ritmaleni, Sardjiman, Widyastani, F.A., Ardinova, S.E.S., dan Andhini, J.D., 2013b, Identification of Side Products From The Hydrogenation Reaction of Bis(substitutedbenzylidene)cyclopentanone/- cyclohexanone by Using Palladium/Carbon Catalyst. *Chemistry and Materials Research*, **3**: 48–57.
- Ritmaleni, R., Praditya, I., Wibowo, H., dan Sardjiman, S., 2015, Synthesis of Tetrahidrohexagamavunon-5 and Tetrahydrohexagamavunon-7,. *Indonesian Journal of Pharmacy*, **26**: 103.
- Rowe, R.C., Sheskey, P.J., dan Owen, S.C., 2005, *Handbook of Pharmaceutical Excipients*, 5rd Ed, 65-68, 120-123, 301-303, 624-626, 683-684, 785-787, 794-795, Pharmaceutical Press, American Pharmaceutical Association.
- Sanches, C.M., 2002, Review: Methods Used to Evaluate the Free Radical Scavenging Activity in Foods and Biological Systems., *Food Sci Tech Int.*, **8** (3), 121-136.
- Sabinsa Corporation, 2000. 'Tertrahydrocurcuminoids A Superior Bioprotectant', . URL: <http://www.tetrahydrocurcuminoids.com/> (diakses tanggal 2/10/2015).

- Reksohadiprodjo, M. S., Timmerman, H. 2003, Derivatives of Benzyldiene CycloHexanone, Benzyldiene Cyclopentanone and Benzyldiene Acetone and Their Synthesis, *US Patent*, **6**, 541-672
- Setty, C.M., Babubhai, S.R., dan Pathan, I.B., 2010, Development of Valdecocix topical gels: Effect of formulation variables on the release of valdecocix, *Int J Pharm Pharm Sci.*, **2**(1), 70-73.
- Shah, H. dan Mahajan, S.R., 2014, Screening of topical gel containing lycopene and dexamethasone against UV radiation induced photoaging in mice. *Biomedicine & Aging Pathology*, **4**: 303–308.
- Sharma S, Pawar S, dan Jain U.K, 2012, Development and evaluation of topical gel of curcumin from different combination of polymers formulation & evaluation of herbal gel, *Intl J Pharm Pharm Sci.*, **4** (4), 453-456
- Sharon, N., Anam, S., dan Yuliet, 2013, Formulasi Krim Ekstrak Etanol Bawang Hutan (*Eleutherine palmifolia* L. Merr), *Online Journal of Natural Science*, **2**(3), 111-122.
- Shin, H.-J., Kim, K.K., Benayad, A., Yoon, S.-M., Park, H.K., Jung, I.-S., dkk., 2009, Efficient reduction of graphite oxide by sodium borohydride and its effect on electrical conductance. *Advanced Functional Materials*, **19**: 1987–1992.
- Silverstein, R.M., dan Webster, F.X., 1998, *Spectrometric Identification of Organic Compounds*, 6th Ed., John Wiley & Sons Inc., New York.
- Simbara, A. 2009, Sintesis dan Uji Antioksidan Tetrahidro Pentagamavunon-0 (THPGV-0), *Tesis*, Fakultas Farmasi UGM
- Sinko, P., 2006, *Physical Pharmacy and Pharmaceutical Sciences*, 5th ed. Lippincott Williams and Wilkins, Philadelphia. 561-563 940-1010, 1162, 1163, 1170.
- Solomons, T. W. G., and Fryhle, C. B., 2011, *Organic Chemistry*, 10th Edition, John Wiley & Sons, New York.
- Suhaime, I.H.B., Tripathy, M., Mohamed, S.M., dan Majeed, A.B.A., 2012, The Pharmaceutical Application of Carbomer, *AJPSR.*, **2** (2), 1-15.
- Sumiyoshi, M dan Kimura, Y., 2009, Effects of a turmeric extract (*Curcuma longa*) on chronic ultraviolet B irradiationinduced skin damage in melanin-possessing hairless mice, *Phytomedicine.*, **16**, 1137–1143 cit. Mukherjee, P.K., Maity, N., Nema, N.K., dan Sarkar, B.K., 2011, Bioactive compounds from natural resources against skin aging, *Phytomedicine.*, **19**, 64-73.
- Suwanti.S.I.,2015, Sintesis dan Uji Antioksidan Senyawa Tetrahidropentagamavunon-5 dengan Metode Penangkapan Radikal DPPH dan Reduksi Ion Feri, *Skripsi*, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.

- Thiele, J.J dan Mudiyanse, S.E., 2007, Vitamin E in Human Skin: Organ-specific Physiology and Considerations for its Use in Dermatology, *Molecular Aspects of Medicine*, **28**, 646–667.
- Vieira, R.P., Fernandes, A.R., Kaneko, T.M., Consiglieri, V.O., Pinto, C.A.S. de O., Pereira, C.S.C., dkk., 2009. Physical and Physicochemical Stability Evaluation of Cosmetic Formulations Containing Soybean Extract Fermented by *Bifidobacterium Animalis*. *Brazilian Journal of Pharmaceutical Sciences*, **45**: 515–525.
- Verma, A., Singh, S., Kaur, R., Kumar, A., dan Jain, U.K., 2013, Formulation, Optimization, and Evaluation of Clobetasole Propionate Gel, *Intl J Pharm Pharm Sci.*, **5** (4), 666-674.
- Voigt. R., 1984, *Buku Pelajaran Teknologi Sediaan Farmasi*, diterjemahkan oleh Soendani, N.S dan Mahtilda, B.N., 312, Yogyakarta, Gadjah Mada University Press.
- Wibowo, H., 2013, Sintesis Tetrahidroheksagamavunon-5 dari Starting material Heksagamavunon-5 dengan Katalis Paladium Karbon Melalui Reaksi Hidrogenasi, *Skripsi*, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta
- Wade, Ainley, and Paul J. Weller., 1994, *Handbook of Pharmaceutical Recipients, second edition*, American Pharmaceutical Association, Washington.
- Yogesh R, Jorapur dan Dae Yoon Chi., 2005, Ionic Liquids: An Enviromentally Friendly Media for Nucleophilic Substution Reaction, *Departemen of Chemistry: Inha University*, Inchon 402-751.
- Zuhra, C.F., Tarigan, J.B., dan Sihotang, H., 2008. Aktivitas Antioksidan Senyawa Flavonoid dari Daun Katuk (*Sauropus androgynus* (L) Merr.). *Jurnal Biolog Sumatra* **3**(1), 7-10