

## DAFTAR PUSTAKA

- Ahmad, M., Yamin, B.M., & Lazim, A.M., 2013, A Study on Dispersion and Characterisation of  $\alpha$ -mangostin Loaded pH Sensitive Microgel Systems, *Chemistry Central Journal*, **7**, 85.
- Aiache, J.M & Devissaquet, J., 1982, *Farmasetika 2 Biofarmasi*, Airlangga University Press, Surabaya.
- Akao, Y., Nakagawa, Y., Likuna, M., & Nozawa, Y., 2008, Anti-Cancer Effect of Xanthones from Pericarps of Mangosteen, *International Journal of Molecular Sciences*, **9** (3), 355-370.
- Aksoy, L., Kolay, E., Agilonu, Y., Aslan, Z., & Kargioglu, M., 2013, Free Radical Scavenging Activity, Total Phenolic Content, Total Antioxidant Status, and Total Oxidant Status of Endemic *Thermopsis turcica*, <http://www.sciencedirect.com/science/article/pii/S1319562X13000144#b0135>, 02 November 2017.
- Alhasany, W.H., 2014, Uji Aktivitas Penangkapan Radikal 2,2-Difenil-1-Pikrilhidrazil (DPPH) oleh Ekstrak Kulit Buah Manggis (*Garcinia mangostana* L.) dan Fraksi-fraksinya, *Skripsi*, Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Ananingrum, G.W., 2017, Formulasi Ekstrak Kulit Buah Manggis (*Garcinia mangostana* L.) dalam Pembawa Campuran Propilen Glikol-Air dan Uji Transpor secara *In vitro*, *Skripsi*, Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Anonim, 1995, *Farmakope Indonesia*, Edisi IV, Depkes RI, Jakarta.
- Anonim, 2003, Transdermal and Topical Drug Delivery, <http://www.innoleague.com/Human%20Skin.pdf>, 05 November 2017.
- Anonim, 2005, DPPH Free Radical, <https://pubchem.ncbi.nlm.nih.gov/compound/2735032#section=Top>, 04 November 2017.
- Anonim, 2011, *Khasiat Fantastis Kulit Buah Manggis*, PT. Gramedia Widiasarana Indonesia, Jakarta.
- Anonim, 2011, *Sodium Carboxymethyl Cellulose*, <http://www.fao.org/ag/agn/jecfa-additives/specs/monograph11/additive-396-m11.pdf>, 22 Oktober 2017.
- Anonim, 2013, DPPH, <https://www.caymanchem.com/product/14805>, 04 November 2017.
- Anonim, 2014, *Farmakope Indonesia*, Edisi V, Departemen Kesehatan Republik Indonesia, Jakarta.

- Anonim, 2014, Safety Data Sheet Camphor, [https://beta-static.fishersci.com/content/dam/fishersci/en\\_US/documents/programs/education/regulatory-documents/sds/chemicals/chemicals-c/S25232.pdf](https://beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/education/regulatory-documents/sds/chemicals/chemicals-c/S25232.pdf), 26 Maret 2017.
- Anonim, 2015, *Statistik Produksi Hortikultura Tahun 2014*, Kementerian Pertanian Direktorat Jenderal Hortikultura, Jakarta.
- Anonim, 2017, *Garcinia mangostana* L. Mangosteen, <https://plants.usda.gov/core/profile?symbol=GAMA10>, 25 April 2017.
- Anonim, 2017, Purple Mangosteen, <http://foodb.ca/foods/411>, 25 April 2017.
- Anonim, 2017, Sodium Carboxymethyl Cellulose, <http://celluloseether.com/sodium-carboxymethyl-cellulose-cmc/>, 18 Februari 2018.
- Anonim, 2018, Mangostin, <https://pubchem.ncbi.nlm.nih.gov/compound/Mangostin#section=Top>, 20 Februari 2018.
- Anonim, 2018, Xanthone, <https://chem.nlm.nih.gov/chemidplus/rn/90-47-1>, 20 Februari 2018
- Ansel, H.C., Allen, L.V., & Popovich, N.G., 1999, *Pharmaceutical Dosage Forms and Drug Delivery Systems*, 7th Edition, Lippincott Williams & Wilkins, London, 250.
- Aponno, J.V., Yamlean, P.V.Y., & Supriati, H.S., 2014, Uji Efektivitas Sediaan Gel Ekstrak Etanol Daun Jambu Biji (*Psidium guajava* Linn) terhadap Penyembuhan Luka yang Terinfeksi Bakteri *Staphylococcus aureus* pada Kelinci (*Oryzagalus cuniculus*), *Pharmacon*, **3** (3), 279-286.
- Barry, B.W., 1983, *Dermatological Formulations : Percutaneous Absorption*, Marcel Dekker Inc, New York, 32-105.
- Bauer, K., Garbe, D., & Surburg, H., 1997, *Common Fragrance and Flavor Materials*, Wiley-VCH Verlag: Weinheim, Germany.
- Chan W.K., Tan, L.T.H., Chan, K.G., Lee, L.H., & Goh, B.H., 2016, Nerolidol : A Sesquiterpene Alcohol with Multi-Faceted Pharmacological and Biological Activities, *Molecules*, **21** (5), 529.
- Chaverri, P.J., Cardenas, R.N., Orozco, Ibarra M., & Rojas, P., 2008, Medicinal Properties of Mangosteen (*Garcinia mangostana*), *Food Chem Toxicol*, **46**, 3227-3239.
- Chen, J., Jiang, Q., Chai, Y., Zhang, H., Peng, P., & Yang, X., 2016, Natural Terpenes as Penetration Enhancers for Transdermal Drug Delivery, <http://www.mdpi.com/1420-3049/21/12/1709>, 02 Oktober 2017.

- Chen, W., Vermaak, I., & Viljoen, A., 2013, *Camphor : A Fumigant During The Black Death and A Coveted Fragrant Wood In Ancient Egypt and Baylon- A Review*, *Molecules*, **18**, 5434-5454.
- Cui, Y., Li, L., Zhang, L., Li, J., Gu, J., Gong, H., Guo, P., & Tong, W., 2011, Enhancement and Mechanism of Transdermal Absorbtion of Tepene- Induced Propanolol Hydrochloride, *Arch Pharm Res*, **34** (9), 1477-1485.
- Day, R.A. & Underwood, A.I., 1990, *Analisis Kimia Kuantitatif*, diterjemahkan oleh R. Soendoro, Edisi 4, Erlangga, Jakarta.
- Djuanda, A., 1999, *Ilmu Penyakit Kulit dan Kelamin*, Edisi 3, 7-8, Balai Penerbit FKUI, Jakarta.
- Doyle, M.E., Steinhart, C.E., & Cochrane, B.A., *Food Safety*, 206-208, Marcel Dekker, New York.
- Droge, W., 2002, Free Radicals in The Physiological Control of Cell Function, *Physiol Rev*, **82**, 47-95.
- Ebennezer, E., Djajadisastra, J., & Iswanandana, R., 2015, Uji Stabilitas Fisik dan Pengaruh Vitamin C terhadap Aktivitas dan Daya Penetrasi Ekstrak Etanol Kulit Manggis (*Garcinia mangostana* L.) pada Serum Antikerut, *Skripsi*, Fakultas Farmasi, Universitas Indonesia, Jakarta.
- El-kattan, A.F., Asbill, C.S., & Michniak, B.B., 1999, The Effect of Terpene Enhancer Lipophilicity on The Percutaneous Permeation of Hydrocortisone Formulated in HPMC Gel Systems, *International Journal of Pharmaceutics*, **198** (2000), 179-189.
- Fadhilah, Nida., 2017, Formulasi Krim A/M dan M/A Ekstrak Kulit Buah Manggis (*Garcinia mangostana* L.) dan Uji Sifat Fisik Krim, Daya Antioksidan, serta Kemampuan Transpor melewati Membran, *Skripsi*, Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Florence, A.T., dan Attwood, D., 1994, *Physicochemical Principles of Pharmacy*, 2<sup>nd</sup> edition, Macmillan, Hongkong, 283-300 cit. Hendradi, Esti dan Martodiharjo, Suwaldi., 1996, Pengaruh Sifat Fisikokimia Beberapa Antihistamina terhadap Proses Transpornya Melewati Memberan Selofan, *Majalah Farmasi Indonesia*, **7** (4), 191-198.
- Gandjar, I.G. & Rohman, A., 2007, *Kimia Farmasi Analisis*, Pustaka Pelajar, Yogyakarta.
- Godwin, D.A. & Michniak, B., 1999, Influence of Drug Lipophilicity on Terpenes as Transdermal Penetration Enhancers, *Drug Development and Industrial Pharmacy*, **25** (8), 905-915.

- Gold, L.S., Slone, T.H., & Ames, B.N., 2001, Natural and Synthetic Chemicals in The Diet : A Critical Analysis of Possible Cancer Hazards, *Food Safety and Food Quality Issues in Environmental Science and Technology*, **15**, 95-128.
- Gurning, H.E.T., Wullur, A.C., & Lolo, W.A., 2016, Formulasi Sediaan Losio dari Ekstrak Kulit Buah Nanas (*Ananas comosus* L.(Merr)) sebagai Tabir Surya, *Pharmacon*, **5** (3).
- Hendradi, Esti dan Martodiharjo, Suwaldi., 1996, Pengaruh Sifat Fisikokimia Beberapa Antihistamina terhadap Proses Transpornya Melewati Memberan Selofan, *Majalah Farmasi Indonesia*, **7** (4), 191-198.
- Hudrey, S.E., Chen, W., Rousseaux, C.G., 1996, *Bioavailability in Environmental Risk Assessment*, 67-70, CRC Press, USA.
- Isaacs, N. S., 1995, *Physical Organic Chemistry*, 2nd edition, Longman, United Kingdom.
- Jujun, P., Pootakham, K., Pongpaibul, Y., Duangrat, C., & Tharavichitkul, P., 2008, Acute and Repeated Dose 28-Day Oral Toxicity Study of *Garcinia mangostana* Linn. Rind Extract, *CMU.J.Nat.Sci*, **7** (2), 199-208.
- Jung, K., Seifert, M., Herrling, T.H., & Fuchs, J., 2007, UV-generated free radicals (FR) in Skin : Their Prevention by Sunscreens and Their Induction by Self-tanning Agents, [http://www.dr-jetskeultee.nl/jetskeultee/download/common/jung\\_uv.pdf](http://www.dr-jetskeultee.nl/jetskeultee/download/common/jung_uv.pdf), 24 Oktober 2017.
- Kesting, R.E., dan Irvine, 1985, *Synthetic Polimeric Membranes*, John Wiley and Sons, New York, 302-303 cit. Hendradi, Esti dan Martodiharjo, Suwaldi., 1996, Pengaruh Sifat Fisikokimia Beberapa Antihistamina terhadap Proses Transpornya Melewati Membran Selofan, *Majalah Farmasi Indonesia*, **7**(4), 191-198.
- Koleva, I.I., Beek, T.A.V., Linssen, J.P.H., Groot, A.D., & Evstatieva, L.N., 2002, Screening of Plant Extracts for Antioxidant Activity : A Comparative Study on Three Testing Methods, *Phytochemical Analysis*, **13**, 8-17.
- Kumar, M. & Ando, Y., 2003, Single-wall and Multi-wall Carbon Nanotubes from *Camphor* A Botanical Hydrocarbon, *Diamond Related Material*, **12**, 1845-1850.
- Kuncari, E.S., Iskandarsyah, & Praptiwi, 2014, Evaluasi, Uji Stabilitas, dan Sineresis Sediaan Gel yang Mengandung Minoksidil, Apigenin, dan Perasan Herba Seledri (*Apium graveolens* L.), *Buletin Penelitian Kesehatan*, **42** (4), 213-222.
- Kunta, J.R., Goskonda, V.R., Brotherton, H.O, Khan, M.A., & Reddy, I.K., 1997, Effect of Menthol and Related Terpenes on The Percutaneous Absorption

of Propanolol Across Excised Hairless Mouse Skin, *Journal of Pharmaceutical Sciences*, **86** (12), 1369-1373.

- Kuswahyuning, R., Grice, J.E., Moghimi, H.R., & Roberts, M.S., 2015, *Formulation Effects in Percutaneous Absorption*, [https://books.google.co.id/books?id=h076BwAAQBAJ&pg=PA109&lpg=PA109&dq=kuswahyuning&source=bl&ots=Lpxr2jNW6f&sig=2vLJn3RzgWLkGHDRcCtp523kzAE&hl=id&sa=X&ved=0ahUKEwj2\\_ciy0q7aAhWLgI8KHd1QDEwQ6AEI ZjAN#v=onepage&q=kuswahyuning&f=false](https://books.google.co.id/books?id=h076BwAAQBAJ&pg=PA109&lpg=PA109&dq=kuswahyuning&source=bl&ots=Lpxr2jNW6f&sig=2vLJn3RzgWLkGHDRcCtp523kzAE&hl=id&sa=X&ved=0ahUKEwj2_ciy0q7aAhWLgI8KHd1QDEwQ6AEI ZjAN#v=onepage&q=kuswahyuning&f=false), 10 April 2018.
- Kwartiningsih, E., Setyawardhani D.A., Wiyatno, A., & Triyono, A., 2009, Zat Pewarna Alami Tekstil, *Ekulilibrium*, **8** (1), 41-47.
- Lapczynski, A., Bhatia, S.P., Letizia, C.S., & Api, A.M., 2008, Fragrance Material Review on Nerolidol (Isomer Unspecified), *Food and Chemical Toxicology*, **46**, 247-250.
- Lesmana, Indra., 2017, Pengaruh Etanol Pada Formulasi Gel Ekstrak Kering Kulit Buah Manggis (*Garcinia mangostana* L.), Sifat Fisik, Daya Antioksidan, dan Kemampuan Difusinya Melewati Membran, *Skripsi*, Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Lieberman, H.A., Rieger, M.M., & Banker, G.S., 1996, *Pharmaceutical Dosage Forms*, Edisi kedua, Marcel Dekker, New York.
- Lobo, V., Patil, A., Phatak, A., & Chandra, N., 2010, Free Radicals, Antioxidants and Functional Foods: Impact on Human Health, *Pharmacognosy Review*, **4** (8), 118-126.
- Mahantesh S.P., Gangawane. A.& Patis. C., 2012, Free Radicals, Antioxidants, Diseases, and Phytomedicines in Human Health : Future Perspects, *World Research Journal of Medicinal & Aromatic Plants*, **1** (1), 06-10.
- Maulina, L. & Sugihartini, N., 2015, Formulasi Gel Ekstrak Etanol Kulit Buah Manggis (*Garcinia mangostana* L.) dengan Variasi Gelling Agent sebagai Sediaan Luka Bakar, *Pharmaciana*, **5** (1), 43-52.
- Miryanti, Y.I.P.Ari., Sapei, Lanny., Budiono, Kurniawan., & Indra, Stephen., 2011, Ekstraksi Antioksidan dari Kulit Buah Manggis (*Garcinia mangostana* L.), *skripsi*, Universitas Katholik Parahyangan, Bandung.
- Molyneux, Philip., 2004, The Use of Stable Free Radical Diphenylpicrylhydrazyl (DPPH) for Estimating Antioxidant Activity, *Songklanakarinn J. Sci. Technology*, **26** (2), 211-219.
- Nandi, M., 2005, *Study of Chiral Recognition of Model Peptides and Odorants: Carvone and Camphor*, *Curr.Sci*, **88**, 1929-1937.

- Nilawati, A., Sulaiman, Tn. S., dan Sasmita, E., 2015, Pengaruh Metil Selulosa 4000 dan Propilen Glikol terhadap Stabilitas Fisik Gel Vitamin C, *Jurnal Farmasi Indonesia*, **12** (2), 164-178.
- Nugroho, A. E., 2011, *Manggis (*Garcinia mangostana* L.) : Dari Kulit Buah yang Terbuang hingga Menjadi Kandidat Suatu Obat*, Universitas Gadjah Mada, Yogyakarta.
- Okonogi, S., Duangrat, C., Anuchpreeda, S., Tachakittirungrod, S., & Chowwanapoonpohn, S., 2007, Comparison of Antioxidant Capacities and Cytotoxicities of Certain Fruit Peels, *Food Chemistry*, **103**, 839-846.
- Packer, L., 2002, *Handbook of Antioxidant*, Marcel Dekker Inc, New York.
- Percival, M., 1998, Antioxidants, *Clinical Nutrition Insights*, **1**(96).
- Petters MM, Lau SS., Dulik D, Murphy D., van Ommen B., van Balderen J., Monks TJ., 1996, Metabolism of tert-butylhydroquinone to S-substituted Conjugates in The Male Fischer 344 Rat, *Chem Res Toxicol*, **9** (1), 133.
- Pham-Huy, L.A., He, Hua., & Pham-Huy, C., 2008, Free Radicals, Antioxidants in Disease and Health, *International Journal od Biomedical Science*, **4** (2), 89-96.
- Poljšak, Borut & Dahmane, Raja., 2012, *Free Radicals and Extrinsic Skin Aging*, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3299230/#B5>, 24 Oktober 2017.
- Pothitirat, W., Chomnawang, M.T., & Gritsanapan, W., 2010, Anti-Acne-Inducing Bacterial Activity of Mangosteen Fruit Rind Extracts, *Medical and Principles Practice*, **19**, 281-286.
- Prasanthi, D. & Lakshmi, P.K., 2012, Terpenes : Effect of Lipophilicity in Enhancing Transdermal Delivery of Alfuzosin Hydrochloride, *Journal of Advanced Pharmaceutical Technology & Research*, **3** (4), 216-223.
- Rowe, R.C., Sheskey, P.J., & Quinn, M.E., 2009, *Handbook of Pharmaceutical Excipients*, 6th Edition, Pharmaceutical Press, London.
- Sapra, B., Jain, S., & Tiwary, A.K., 2008, Percutaneous Permeation Enhancement by Terpenes : Mechanistic View, *AAPSJ*, **10** (1), 120.
- Shargel, L., Wu-Pong, S., & Yu, A.B.C., 2005, *Biofarmasetika dan Farmakokinetika Terapan*, diterjemahkan oleh Fasich dan Budi Suprapti, Edisi Kelima, 252, Airlangga University Press, Surabaya.
- Sinko, P.J., 2006, *Martin Farmasi Fisika dan Ilmu Farmasetika : Prinsip Kimia Fisika dan Biofarmasetika dalam Ilmu Farmasetika*, diterjemahkan oleh Joshita Djajadisastra dan Amalia H.Hadinata, Edisi Kelima, 654-655, EGC, Jakarta.

- Sothornvit, R., 2012, Drying Process And Mangosteen Rind Powder Product, *Acta Hort (ISHS)*, **928**, 233-241.
- Sriviriyakul, Karuna., Sithisarn, Pongtip., Managit, Chittima., Trithossadech, Ponglert., & Lueangarun, Sapparul., 2017, Clinical Efficacy of Topical Mangosteen Extract Nanoparticle Loaded Gel Compared with 1% Clindamycin Gel in The Treatment of Mild to Moderate Acne Vulgaris, *Thai Journal of Pharmaceutical Sciences*, **41** (121).
- Suhery, W.N., Fernando, A., & Has, N., 2016, Uji Aktivitas Antioksidan dari Ekstrak Bekatul Padi Ketan Merah dan Hitam (*Oryza sativa* L. var. glutinosa) dan Formulasinya dalam Sediaan Krim, *Pharmacy*, **13** (01).
- Supomo, Bella R.W., Dayang., & Sa'adah, Hayatus., 2015, Formulasi Granul Ekstrak Kulit Buah Manggis (*Garcinia mangostana* L.) menggunakan Aerosil dan Avicel PH 101, *J. Trop. Pharm. Chem*, **3** (2), 131-137.
- Susanto, R.C. & Ari, GA Made, M., 2013, *Penyakit Kulit dan Kelamin*, 1-4, Nuha Medika, Yogyakarta.
- Swarbrick, J. dan Boylan, J., 1995, *Encyclopedia Of Pharmaceutical Technology : Permeation Enhancement through Skin*, Volume 11, 456, Marcel Dekker Inc, New York.
- Tahir, Iqmal., Wijaya, Karna., & Widianingsih, Dinni., 2003, Terapan Analisis Hansch untuk Aktivitas Antioksidan Senyawa Turunan Flavon atau Flavonol, *Makalah Seminar Khemometri*, Fakultas MIPA, Universitas Gadjah Mada, Yogyakarta.
- Tranggono, I.R & Latifah, Fatma., 2007, *Buku Pegangan Ilmu Pengetahuan Kosmetik*, Cetakan I, 20-46, Gramedia Pustaka Utama, Jakarta.
- Triandari, Rizky., 2014, Pengaruh Perbedaan *Gelling Agent* terhadap Laju Pelepasan Ibuprofen dalam Sediaan Gel Dispersi Padat Ibuprofen-PEG 6000, *Skripsi*, Fakultas Farmasi, Universitas Jember.
- Vaddi, H.K., Ho, P.C., & Chan, S.Y., 2002, Terpenes In Propylene Glycol as Skin-Penetration Enhancers : Permeation and Partition of Haloperidol, Fourier Transform Infrared Spectroscopy, and Differential Scanning Calorimetry, *Journal of Pharmaceutical Science*.
- Voigt, R., 1994, *Buku Pelajaran Teknologi Farmasi*, diterjemahkan oleh Soendani Noerono, Edisi Kelima, 354, Gadjah Mada University Press, Yogyakarta.
- Wade, L.G., 2003, *Organic Chemistry*, 5th Edition, Pearson Education, USA.
- Wahdaningsih, S., Setyowati, E.P., & Wahyuono, S., 2011, Aktivitas Penangkap Radikal Bebas dari Batang Pakis (*Alsophila glauca* J.Sm), *Majalah Obat Tradisional*, **16** (3), 156-160.

- Watson, David G., 2005, *Pharmaceutical Analysis*, diterjemahkan oleh Winny R. Syarief & Amalia H. Hadinata, 2<sup>nd</sup> edition., Elsevier Limited, UK.
- Weecharansan, W., Opanaposit,P., Sukma, M., Ngawhirunpat, T., Sotanaphun, U., & Siripong, P., 2006, Antioxidative and Neuroprotective Activities of Extracts from the Fruit Hull of Mangosteen (*Garcinia mangostana* Linn.),*Medical Principles and Practices*, **15**, 281-287.
- Winarsi, H., 2007, *Antioksidan Alami dan Radikal Bebas : Potensi dan Aplikasinya dalam Kesehatan*, Kanisius, Yogyakarta.
- Xie, F., Chai, J., Hu, Q., Yu, Y., Ma, L., Liu, L., Zhang, X., Li, B.,& Zhang, D., 2016, Transdermal Permeation of Drugs With Differing Lipophilicity: Effect of Penetration Enhancer *Camphor*, *International Journal of Pharmaceutics*, **507**, 90-101.
- Yoshikawa, M., Harada, E., Miki, A., Tsukamoto, K., Si Qian, L.,& Yamahara, J., 1994, Antioxidant Constituents From The Fruit Hulls of Mangosteen (*Garcinia mangostana* L.) Originating in Vietnam, *Yakugaku Zasshi*, **114**, 129–133.
- Zuccarini, P., 2009, Camphor : Risks and Benefits of a Widely Used Natural Product, *JASEM*, **13** (2), 69-74.