

## DAFTAR PUSTAKA

- Adhayanti, I., Nurisyah, dan Abdullah, T., 2019, Aktivitas UV Protektif Ekstrak Buah Jamblang, *Media Farmasi Poltekes Makassar*, 15(1):79– 83.
- Aji Aryo, 2020, Kosmetik Tabir Surya dan Alasan Pemilihan Produk yang Digunakan Mahasiswa Klaster Kesehatan Universitas Gadjah Mada, Skripsi, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Anief M., 1999, *Formulasi Suspensi dan Emulsi*, Cetakan I, 110-117, UGM Press, Yogyakarta.
- Anonim, 2009, Pemilihan, Penggunaan dan Penandaan yang Perlu Diperhatikan pada Sediaan Kosmetik Tabir Surya, *Naturakos*, 4(11):1–12.
- Anonim, 2013, Peraturan Menteri Kesehatan tentang Perubahan atas Peraturan Menteri Kesehatan Nomor 1175/MENKES/PER/VIII/2010 tentang Izin Produksi Kosmetika, Departemen Kesehatan Republik Indonesia, Jakarta.
- Anonim, 2015, Peraturan Badan Pengawas Obat dan Makanan Nomor 19 Tahun 2015 tentang persyaratan Teknis Kosmetik, BPOM, Jakarta.
- Anonim, 2020, *Farmakope Indonesia Edisi VI*, Kementerian Kesehatan RI, Jakarta.
- Ansel, H.C., Popovich, N.G., Allen, L.V., 2011, *Pharmaceutical Dosage Form and Drug delivery System Ninth Edition*, London, New York, 225-235.
- Aryadi, T., dan Sinto, D., 2009, Pengaruh Sinar Ultraviolet Terhadap Pertemubuhan Bakteri *Baccillus* sp. Sebagai Bakteri Kontaminan, *Jurnal Kesehatan*, 2(2).
- Bacardit, A dan Cartoixa, X., 2020, Revisiting the Role of Irradiance in the Determination of Sunscreens' Sun Protecting Factor, *J.Phys.Chem. Lett* 1209-1214.
- Baki, G., & Alexander, K. S., 2015, *Introduction to cosmetic formulation and technology*. John Wiley & Sons. Hoboken, New Jersey.
- Baran, R., & Maibach, H. I., 2017, *Textbook of Cosmetic Dermatology*, 5th ed, CRC Press. Boca Raton, FL.
- Barokah, R., 2014, Variasi Harga HLB Emulgator Berdasarkan Perbandingan Tween 80 Dan Span 80 Terhadap Sifat Fisik Dan Kimia Krim Ekstrak Etanol Curcuma Mangga Val Sebagai Sunscreen, Skripsi, Fakultas Matematika Dan Ilmu Pengetahuan Alam Universitas Sebelas Maret, Surakarta.
- Battistin, M., Dissette, V., Bonetto, A., Durini, E., Manfredini, S., Marcomini, A., Casagrande, E., Brunetta, A., Ziosi, P., Molesini, S., Gavioli, R., Nicoli, F., Vertuani, S., & Baldisserotto, A., 2020, A New Approach to UV Protection by Direct Surface Functionalization of TiO<sub>2</sub> with the Antioxidant Polyphenol Dihydroxyphenyl Benzimidazole Carboxylic Acid, *Nanomaterials* (Basel, Switzerland), 10(2):231.
- Burns, T., Breathnach, S., Cox, N., dan Griffiths., C., 2013, *Rook's Textbook of Dermatology*, 8th Ed., Wiley-Blackwell Publishing, United Kingdom.
- Cefali, L. C., J. A. Ataide, P. Moriel, M. A. Foglio dan P. G. Mazzola, 2016, Plant-Based Active Photoprotectants for Sunscreens, *International Journal of Cosmetic Science*, 38(4): 346–353.
- Chatelain, E., & Gabard, B. (2001). Photostabilization of butyl methoxydibenzoylmethane (Avobenzone) and ethylhexyl methoxycinnamate by bis-ethylhexyloxyphenol

- methoxyphenyl triazine (Tinosorb S), a new UV broadband filter. *Photochemistry and photobiology*, 74(3), 401–406. [https://doi.org/10.1562/0031-8655\(2001\)074<0401:pobmaa>2.0.co;2](https://doi.org/10.1562/0031-8655(2001)074<0401:pobmaa>2.0.co;2)
- Chu, D.H., 2012, Development and Structural of Skin, Eighth. ed. McGraw Hill, New York.
- Daud, N. S., Musdalipah, Isdayati, 2018, Optimasi Formula Losion Tabir Surya Ekstrak Kulit Buah Naga Super Merah (*Hyclocereus costaricensis*) menggunakan Metode Desain D-Optimal, *J.S.F.K*, 5(2):72-77.
- Dayan, N., 2017, Handbook of Formulating Dermal Applications: A Definitive Practical Guide. John Wiley & Sons, Inc, Hoboken, New Jersey : Beverly, Massachusetts: Scrivener Publishing, 21:591-602.
- D'Orazio, J., Jarrett, S., Amaro-Ortiz, A., dan Scott, T., 2013, UV radiation and the skin. *International journal of molecular sciences*, 14(6):1222–12248.
- Draeos, Z.D., & Thaman, L.A., 2016, Cosmetic Formulation of Skin Care Products, 75, 135-137, 157-161, Taylor and Francis Group, New York.
- Dutra, Elizângela Abreu, 2004, Determination of Sun Protection Factor (SPF) of Sunscreens by Ultraviolet Spectrophotometry. *Brazilian Journal of Pharmaceutical Sciences* 40:381-384.
- Elmarzughi, N. A., Keleb, E.I., Mohamed, A.T., Issa, Y.S., Hamza, A.M., Layla, A.A., Salama, M., & Bentaleb, A.M., 2013, The Relation between Sunscreen and Skin Pathochanges Mini Review, *International Journal of Pharmaceutical Science Invention*, 2(7):43-52
- Elya, B., Dewi, R., dan Haqqi M., 2013, Antioksidan Cream of *Solanum lycopersium* L., *Int. J. Pharmatech. Res.*, 5(1):233-238.
- Endoh, I., Di Girolamo, N., Hampartzoumian, T., Cameron, B., Geczy, C. L., & Tedla, N., 2007, Ultraviolet B irradiation selectively increases the production of interleukin-8 in human cord blood-derived mast cells. *Clinical and experimental immunology*, 148(1):161–167.
- Eroschenko, V. P., 2012, *Atlas Histologi DiFiore*, EGC, Jakarta.
- Farris, P. K., 2017, Topical Skin Care and the Cosmetic Patient, Second Edi, Master Techniques in Facial Rejuvenation, Second Edi, Elsevier Inc.
- Fitrianingsih, V., 2018, Optimasi Gelling Agent Karbopol, CMC Natrium, dan Gelatin Serta Uji Aktivitas Gel 3-Nitroalkon Sebagai Tabir Surya Secara In Vitro, Skripsi, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Food and Drug Administration (FDA), 2012, FDA Rules Regulations for Sunscreen, <https://smartshield.com/news/reviews/54-resources/127-new-fda-rules-regulations-for-sunscreen>, 21 September 2022.
- Garg, A., Anggarwal, D., Garg, S., Sigla, A.K., 2002, Spreading of Semi padat Formulation: An Update, *Pharmaceutical Technology*, 84-102.
- Geoffrey, Kiriiri, A., N, Mwangi, dan S.M.Maru., 2019. Sunscreen Products: Rationale for Use, Formulation Development and Regulatory Considerations. *Saudi Pharmaceutical Journal*, 27(7): 1009–18.

- Gregoris, E., Fabris, S., Bartelle, M., Grassato, L., Stevanato, R., 2011, Propolis as potential cosmeceutical sunscreen agent for its combined photoprotective and antioxidant properties, *Int. Journal of Pharm.*, 405:97-101.
- Hassan, L., Dorjay, K., Sami, A., dan Anwar, P., 2013, Sunscreen and Antioxidants as Photo-protective Measures: An update, *Our Dermatology Online*, 4:369-374.
- Helms, R.A., Quan, D.J., Herfindal, E.T., & Gourley, D.R., 2008, *Textbook of Therapeutics: Drug and Disease Management*, 8th Ed., 221-222, Lippincott Williams & Wilkins, USA.
- Hojerová J., Medovčíková A., Mikula, 2011, Photoprotective Efficacy and Photostability of Fifteen Sunscreen Products Having The Same Label SPF Subjected to Natural Sunlight, *International Journal of Pharmaceutical*, 408:27-38.
- Hosseini-nezhad, A., & Holick, M. F., 2013, Vitamin D for health: a global perspective, *Mayo Clinic proceedings*, 88(7):720–755.
- Iskandar, B., Janita, M., & Leny, 2021, Formulasi dan Evaluasi Krim Lidah Buaya (*Aloe vera* Linn) sebagai Pelembab Kulit, *PHARMASIPHA: Pharmaceutical Journal of Islamic Pharmacy*, 5(2): 18-23
- Jansen, Rebecca, Steven Q., Wang, Mark B., Uli O., dan Henry W., Lim, 2013, Photoprotection: Part I. Photoprotection by Naturally Occurring, Physical, and Systemic Agents, *Journal of the American Academy of Dermatology*, 69 (6): 1-853.
- Junita, E., Luliana, S., dan Pratiwi, L., 2019, Penentuan Nilai SPF dan Aktivitas Antioksidan Fraksi Air Buah Mengkudu (*Morinda citrifolia*) secara In Vitro, *Jurnal Mahasiswa Farmasi Fakultas Kedokteran UNTAN*, 4(1).
- Juwita, A. P., Yamlean P., Edy H. J., 2013, Formulasi Krim Ekstrak Etanol Daun Lamun (*Syringodium isoetifolium*). Skripsi, Universitas Sam Ratulangi.
- Kalangi, S. J. R., 2013, Histofisiologi Kulit, *J.B.M*, 5(3):12-20.
- Kanitakis, J., 2012, Anatomy, Histology and Immunohistochemistry of Normal Human Skin, *European Journal of Dermatology*, 12(4):390–401.
- Kanjilal, S., Pierceall, W. E., Cummings, K. K., Kripke, M. L., & Ananthaswamy, H. N., 1993, High frequency of p53 mutations in ultraviolet radiation-induced murine skin tumors: evidence for strand bias and tumor heterogeneity, *Cancer research*, 53(13):2961–2964.
- Kaur, C. D., dan Saraf, S., 2010, In vitro sun protection factor determination of herbal oils used in cosmetics. *Pharmacognosy research*, 2(1):22–25.
- Kendriastuti, D., 2018, Optimasi Formula dan Uji Aktivitas Krim M/A Senyawa Kalkon Sebagai Tabir Surya Secara *In Vitro*, Skripsi, Fakultas Farmasi Universitas Gadjah Mada, Yogyakarta.
- Khavkin, J., & Ellis, D. A., 2011, Aging skin: histology, physiology, and pathology. *Facial plastic surgery clinics of North America*, 19(2):229–234.
- Kockler J, Oelgemöller M, Robertson S, Glass BD, 2012 Photostability of Sunscreens, *J. Photochem Photobiol C Photochem Rev* 13(1):91-110.
- Kullavanijaya P., dan Lim, 2005, Photoprotection, *J. Am. Acad. Dermatol*, 52(6):937-958.
- Lai-cheong, J. E., & Mcgrath, J. A., 2013, Structure and function of skin, hair and nails. *Medicine* (Abingdon. 1995, UK ed. Print), 41(6):317-320.

- Laksmi, Restuning Tri., 2012, Daya Ikat Air, Ph Dan Sifat Organoleptik *Chicken Nugget* Yang Disubstitusi dengan Telur Rebus. *Indonesian Jurnal Of Food Technology* Vol. 1 No.1.
- Langenbucher dan Lange, 2007, Farmasetika, dalam Lachman, L., Lieberman, H.A., dan Kaning, J.L., Teori dan Praktek Farmasi Industri II, Edisi Ketiga, Universitas Indonesia Press, Jakarta.
- Lann, K.L., Surget G., Couteau C., Coiffard L., Cerantola S., Gaillard F., Larnicol M., Zubia M., Guerard F., Poupart N., dan Pouvreau V.S., 2016, Sunscreen, Antioxidant, and Bactericide Capacities of Phlorotannins from the Brown Macroalgae *Halidrys siliquosa*, *Journal of Applied Phycology*, 28(6):3547– 3559.
- Lohani, A., Mishra, A. K., & Verma, A., 2019, Cosmeceutical potential of geranium and calendula essential oil: Determination of antioxidant activity and in vitro sun protection factor, *Journal of cosmetic dermatology*, 18(2):550–557.
- Mansur J., S., Breeder M., N., Azulay R., D., 1986, Determinação Do Fator de Proteção Solar Por Espectrofotometria, *An. Bras. Dermatol*, 61: 121–24.
- Marchaban, Fudholi, A., Sulaiman, T.N.S., Mufrod, Martin, R., Bestari, A., 2019, *Seri Buku Petunjuk Praktikum Teknologi Farmasi: Teknologi Formulasi Sediaan Cair Semi Padat*, Laboratorium Teknologi Farmasi Fakultas Farmasi UGM, Yogyakarta.
- Mizuno, Makoto, Kayo K., Mikiko S., Eiji N., Koichi K., Fukumi F., dan Yuki Y., 2016, The Effects of Continuous Application of Sunscreen on Photoaged Skin in Japanese Elderly People—the Relationship with the Usage, *Journal of Dermatological Science*, 84(1): 72–73.
- Mohania, D., Chandel, S., Kumar, P., Verma, V., Digvijay, K., Tripathi, D., Choudhury, K., Mitten, S. K., & Shah, D., 2017, Ultraviolet Radiations: Skin Defense-Damage Mechanism. *Advances in experimental medicine and biology*, 996:71–87.
- More, B.D., 2007, Physical Sunscreens : On the Comeback Trail, *Indian Journal of Dermatology Venereology and Leprology*, 73(2):80.
- Mulyani, T., Herda A, Rahimah., Selvia R., 2018, Formulasi dan Aktivitas Antioksidan Losion Ekstrak Sureau (*Peperomia pellucida* L.), *J.Curr PharmSci*, vol.2.No.1.
- Murrukmiyadi, M., Ananda, R., Handayani, T.U, 2012, Pengaruh Penambahan Carbomer 934 dan Setil Alkohol sebagai emulgator dalam Sediaan Krim Ekstrak Etanolik Bunga Kembang Sepatu (*Hibiscus rosa-sinesis* L.) terhadap Sifat Fisik dan Aktivitas Antibakteri pada *Staphylococcus aureus*. *Majalah Farmaseutik*, 8(2):152-157.
- Nayank S.H., Nkhat P.D., and Yeole P.G., 2004, *The Indian Pharmacist*, 3(2):7-14.
- Saini, Rummi D., 2018, Review Article Photoprotection Of Skin Against Ultraviolet Radiations By Sunscreen, 9 (1): 9–15.
- Saryanti, D., Setiawan, I., dan Safitri, R., 2019, Optimasi Formula Sediaan Krim M/A dari Ekstrak Kulit Pisang Kepok (*Musa acuminata* L.), Departemen Teknologi Farmasi, Prodi D3 Farmasi Sekolah Tinggi Ilmu Kesehatan Nasional.
- Sayre, R.M., Agin, P.P., Levee, G.J., Marlowe, E., 1979, Comparison of in vivo and in vitro testing of suncreening formulas, *Photochem. Photobiol*, 29, 559-566.

- Serpone, N., 2021, Sunscreen and their usefulness: have we made any progress in the last two decades, *Photochemical and Photobiological Sciences*, 20:189-244.
- Serpone N., Salinaro A., Emeline A., Horikoshi S., Hidaka H., Zhao J., 2002, An in vitro systematic spectroscopic examination of the photostabilities of a random set of commercial sunscreen losions and their chemical UVB/UVA active agents". *Photochemical & Photobiological Sciences*. 1(12): 970–81.
- Seité, S., Fourtanier, A., Moyal, D., & Young, A. R., 2010, Photodamage to human skin by suberythemal exposure to solar ultraviolet radiation can be attenuated by sunscreens: a review, *The British journal of dermatology*, 163(5):903–914.
- Shaath, N.A., 2010, Ultraviolet filters, *Photochem Photobiol Sci*, 9:464–469.
- Sheu, M. T., Lin, C. W., Huang, M. C., Shen, C. H., & Ho, H. O., 2003, Correlation of in vivo and in vitro measurements of sun protection factor. *Journal of Food and Drug Analysis*, 11(2):128-132.
- Sinko, P.J., 2006, Martin's Physical Pharmacy and Pharmaceutical Sciences, 5<sup>th</sup> Ed., 561, 563, 572, Lippincott Williams & Wilkins, Philadelphia.
- Slominski AT, Zmijewski MA, Skobowiat C, Zbytek B, Slominski RM, Steketee JD., 2012, Introduction. In *Sensing the Environment: Regulation of Local and Global Homeostasis by the Skin's Neuroendocrine System*, *Adv Anat Embryol Cell Biol* 212:115.
- Solano F, 2020, Photoprotection and Skin Pigmentation: Melanin-Related Molecules and Some Other New Agents Obtained from Natural Sources. *Molecules* (Basel, Switzerland), 25(7):1537.
- Standar Nasional Indonesia, 1996, Sediaan Tabir Surya, Badan Standarisasi Nasional, Jakarta. SNI 16-4399-1996.
- Stone, H dan Joel, L., 2004, *Sensory Evaluation Practices*, Edisi Ketiga. Elsevier Academic Press, California, USA
- Sudhahar V., dan Balasubramanian V., 2013, Sun production factor (SPF) determination of marketed sunscreen formulation by *In-Vitro* method using UV-VIS spectrophotometer, *Arch. Appl. Sci. Res.*, 5(6):119-122.
- Sugiyono, 2011, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*, Alfabeta, Bandung.
- Swastika A., dan Purwanto M., 2013, Antioxidant Activity of Cream Dosage Form of Tomato Extract, *Trad. Med. J.*, 18(13):132-140.
- Syamsuni, 2006, *Farmasetika Dasar Dan Hitungan Farmasi*, Kedokteran EGC, Jakarta.
- Tranggono, R. I., Latifah, F., 2007, *Buku Pegangan Ilmu Pengetahuan Kosmetik*, 6-8, PT. Gramedia Pustaka Utama, Jakarta.
- Vithayanon P., 2019, *Physical Stability and in Vitro Sun Protection Factor (SPF) of Emulsion Containing Natural Oil and Roasted Barley (Hordeum Vulgare L.) Extract*, Skripsi, Fakultas Bioteknologi Makanan Assumption University, Thailand.
- Voigt, R., 1984, *Buku Pelajaran Teknologi Farmasi*, diterjemahkan oleh Soewandhi, S.N., Edisi V, UGM Press, Yogyakarta.
- Voight, R., 1995, *Buku Pelajaran Teknologi Farmasi*, Edisi V, 382, 442, diterjemahkan oleh Soendari Noerno Soewandhi, Gadjah Mada University Press, Yogyakarta.

- Wilson, Brummitte D., Summer M., dan Frank A., 2012, Comprehensive Review of Ultraviolet Radiation and the Current Status on Sunscreens, Journal of Clinical and Aesthetic Dermatology.
- Wisayastuti, R., dan Ade, S., 2015, Pengujian Aktivitas Antioksidan dan Tabir Surya Ekstrak Etanol Kulit Buah Naga Super Merah (*Hylocereus costaricensis* (F.A.C Weber) Britton & Rose), Scientia, 5(2):70-75.
- Zulkarnain dan Pratama, 2015, Uji SPF In Vitro dan Sifat Fisik Beberapa Produk Tabir Surya yang Beredar di Pasaran, Majalah Farmaseutik, 11(1):275-283