Reference

Abdul Karim, A., Azlan, A., Ismail, A., Hashim, P., Abd Gani, S. S., Zainudin, B. H., & Abdullah, N. A. (2016). Efficacy of cocoa pod extract as anti wrinkle gel on human skin surface. Journal of cosmetic dermatology, 15(3), 283-295. http://dx.doi.org/10.1111/jocd.12218

Abdul Karim, A., Azlan, A., Ismail, A., Hashim, P., Abd Gani, S. S., Zainudin, B. H., & Abdullah, N. A. (2014). Phenolic composition, antioxidant, anti-wrinkles and tyrosinase inhibitory activities of cocoa pod extract. BMC complementary and alternative medicine, 14(1), 1-13.

Addor, F. A. S. A. (2017). Antioxidants in dermatology. Anais brasileiros de dermatologia, 92, 356-362.

Ag Seleci, D., Seleci, M., Walter, J. G., Stahl, F., & Scheper, T. (2016). Niosomes as nanoparticular drug carriers: fundamentals and recent applications. Journal of nanomaterials, 2016.

Ahmed, F., & Iqbal, M. (2018). Antioxidant activity of Ricinus communis. Organic & Medicinal Chemistry International Journal, 5(4), 107-112.

Akbarzadeh, A., Rezaei-Sadabady, R., Davaran, S., Joo, S. W., Zarghami, N., Hanifehpour, Y., ... & Nejati-Koshki, K. (2013). Liposome: classification, preparation, and applications. Nanoscale research letters, 8(1), 1-9.

Alighiri, D., Nuzulina, K., Rodhiyah, M., & Drastisianti, A. (2019, October). Optimization of condition extraction in quantification of total flavonoid content in the seeds of the Arummanis (Mangifera indica L.) mango from Indonesia. In Journal of Physics: Conference Series (Vol. 1321, No. 2, p. 022041). IOP Publishing.

Alkilani, A. Z., McCrudden, M. T., & Donnelly, R. F. (2015). Transdermal drug delivery: innovative pharmaceutical developments based on disruption of the barrier properties of the stratum corneum. Pharmaceutics, 7(4), 438-470.

Bansal, S., Aggarwal, G., Chandel, P., & Harikumar, S. L. (2013). Design and development of cefdinir niosomes for oral delivery. Journal of pharmacy & bioallied sciences, 5(4), 318.

Bartelds, R., Nematollahi, M. H., Pols, T., Stuart, M. C., Pardakhty, A., Asadikaram, G., & Poolman, B. (2018). Niosomes, an alternative for liposomal delivery. PLoS One, 13(4), e0194179. https://doi.org/10.1371/journal.pone.0194179

Benson, H. A. (2012). Skin structure, function, and permeation. Topical and Transdermal Drug Delivery: Principles and Practice, 1st ed.; Benson, HAE, Watkinson, AC, Eds, 1-22.

Blueschke, G., Boico, A., Negussie, A. H., Yarmolenko, P., Wood, B. J., Spasojevic, I., ... & Klitzman, B. (2018). Enhanced drug delivery to the skin using liposomes. Plastic and Reconstructive Surgery Global Open, 6(7). doi: 10.1097/GOX.0000000000001739

Bouwstra, J. A., & Ponec, M. (2006). The skin barrier in healthy and diseased state. Biochimica et Biophysica Acta (BBA)-Biomembranes, 1758(12), 2080-2095.

Brown, T. M., & Krishnamurthy, K. (2020). Histology, dermis. StatPearls [Internet].

Burgess, S. (1998). Liposome Preparation-Avanti® Polar Lipids. Sigma-Aldrich.

Cádiz-Gurrea, M. D. L. L., Fernández-Ochoa, Á., Leyva-Jiménez, F. J., Guerrero-Muñoz, N., Villegas-Aguilar, M. D. C., Pimentel-Moral, S., ... & Segura-Carretero, A. (2020). LC-MS and spectrophotometric approaches for evaluation of bioactive compounds from Peru cocoa by-products for commercial applications. Molecules, 25(14), 3177. https://doi.org/10.3390/molecules25143177

Cerretani, L., & Bendini, A. (2010). Rapid assays to evaluate the antioxidant capacity of phenols in virgin olive oil. In Olives and olive oil in health and disease prevention (pp. 625-635). Academic Press.

Chaudhri, S. K., & Jain, N. K. (2014). History of cosmetics. Asian Journal of Pharmaceutics (AJP): Free full text articles from Asian J Pharm, 3(3). https://dx.doi.org/10.22377/ajp.v3i3.260

Choi, M. J., & Maibach, H. I. (2005). Liposomes and niosomes as topical drug delivery systems. Skin pharmacology and physiology, 18(5), 209-219. https://doi.org/10.1159/000086666

D'Orazio, J., Jarrett, S., Amaro-Ortiz, A., & Scott, T. (2013). UV radiation and the skin. International journal of molecular sciences, 14(6), 12222-12248.

Du, J., Cullen, J. J., & Buettner, G. R. (2012). Ascorbic acid: chemistry, biology and the treatment of cancer. Biochimica et Biophysica Acta (BBA)-Reviews on Cancer, 1826(2), 443-457.

Działo, M., Mierziak, J., Korzun, U., Preisner, M., Szopa, J., & Kulma, A. (2016). The potential of plant phenolics in prevention and therapy of skin disorders. International journal of molecular sciences, 17(2), 160. https://doi.org/10.3390/ijms17020160

Effendy, I., & Maibach, H. I. (1995). Surfactants and experimental irritant contact dermatitis. Contact dermatitis, 33(4), 217-225.

Espinosa-Diez, C., Miguel, V., Mennerich, D., Kietzmann, T., Sánchez-Pérez, P., Cadenas, S., & Lamas, S. (2015). Antioxidant responses and cellular adjustments to oxidative stress. Redox biology, 6, 183-197.

Farage, M. A., Miller, K. W., Elsner, P., & Maibach, H. I. (2008). Intrinsic and extrinsic factors in skin aging: a review. International Journal of Cosmetic Science, 30(2), 87-95.

Favas, R., Morone, J., Martins, R., Vasconcelos, V., & Lopes, G. (2022). Cyanobacteria Secondary Metabolites as Biotechnological Ingredients in Natural Anti-Aging Cosmetics: Potential to Overcome Hyperpigmentation, Loss of Skin Density and UV Radiation-Deleterious Effects. Marine drugs, 20(3), 183.

Fitri, E., Effendi, E., & Azra, A. (2021). Utilization of Dry Cocoa Pod Husks as an Antioxidant-Rich Herbal Drink. Eksakta: Berkala Ilmiah Bidang MIPA (E-ISSN: 2549-7464), 22(2), 102-109.

Friedman, M., & Jürgens, H. S. (2000). Effect of pH on the stability of plant phenolic compounds. Journal of agricultural and food chemistry, 48(6), 2101-2110.

Galetić, F., & Požega, N. (2019). Estimating the Determinants of Demand for Cosmetic Face Care Products. In *7th International OFEL Conference on Governance, Management and Entrepreneurship: Embracing Diversity in Organisations. April 5th-6th, 2019, Dubrovnik, Croatia* (pp. 485-500). Zagreb: Governance Research and Development Centre (CIRU).

Ganceviciene, R., Liakou, A. I., Theodoridis, A., Makrantonaki, E., & Zouboulis, C. C. (2012). Skin anti-aging strategies. Dermato-endocrinology, 4(3), 308-319.

Gharbavi, M., Amani, J., Kheiri-Manjili, H., Danafar, H., & Sharafi, A. (2018). Niosome: a promising nanocarrier for natural drug delivery through blood-brain barrier. Advances in pharmacological sciences, 2018.

Gilaberte, Y., Prieto-Torres, L., Pastushenko, I., & Juarranz, Á. (2016). Anatomy and Function of the Skin. In Nanoscience in Dermatology (pp. 1-14). Academic Press.

Ginting, B., Maulana, I., Saidi, N., & Astryna, S. Y. (2019). Isolation and activity antioxidant test of cocoa pod husk ethyl asetat extracts (Theobroma cacao L). Jurnal Natural, 19(2), 49-53.

Gonzalez, A. C. D. O., Costa, T. F., Andrade, Z. D. A., & Medrado, A. R. A. P. (2016). Wound healing-A literature review. Anais brasileiros de dermatologia, 91, 614-620.

Gorzelanny, C., Mess, C., Schneider, S. W., Huck, V., & Brandner, J. M. (2020). Skin barriers in dermal drug delivery: which barriers have to be overcome and how can we measure them?. Pharmaceutics, 12(7), 684.

Gragnani, A., Mac Cornick, S., Chominski, V., de Noronha, S. M. R., de Noronha, S. A. A. C., & Ferreira, L. M. (2014). Review of major theories of skin aging. Advances in Aging Research, 2014.

Guan, L., Liu, X., Xiao, F., Zeng, M., & Chen, Y. (2016). Characterization of elastic niosomes prepared with various nonionic surfactants for lidocaine hydrochloride transdermal delivery. Nanoscience and Nanotechnology Letters, 8(12), 1033-1039.

Gupta, M., Vaidya, B., Mishra, N., & Vyas, S. P. (2011). Effect of surfactants on the characteristics of fluconazole niosomes for enhanced cutaneous delivery. Artificial Cells, Blood Substitutes, and Biotechnology, 39(6), 376-384.

Hamilton, J. A., Johnson, R. A., Corkey, B., & Kamp, F. (2001). Fatty acid transport. Journal of molecular neuroscience, 16(2), 99-108.

Jacobi, U., Kaiser, M., Toll, R., Mangelsdorf, S., Audring, H., Otberg, N., ... & Lademann, J. (2007). Porcine ear skin: an in vitro model for human skin. Skin Research and Technology, 13(1), 19-24.

Jan, S., Khan, M. R., Rashid, U., & Bokhari, J. (2013). Assessment of antioxidant potential, total phenolics and flavonoids of different solvent fractions of Monotheca buxifolia fruit. Osong public health and research perspectives, 4(5), 246-254.

Jadid, N., Hidayati, D., Hartanti, S. R., Arraniry, B. A., Rachman, R. Y., & Wikanta, W. (2017, June). Antioxidant activities of different solvent extracts of Piper retrofractum Vahl. using DPPH assay. In AIP conference proceedings (Vol. 1854, No. 1, p. 020019). AIP Publishing LLC.

Joseph, E., & Singhvi, G. (2019). Multifunctional nanocrystals for cancer therapy: a potential nanocarrier. Nanomaterials for drug delivery and therapy, 91-116.

Karim, A. A., Azlan, A., Ismail, A., Hashim, P., Abd Gani, S. S., Zainudin, B. H., & Abdullah, N. A. (2014). Phenolic composition, antioxidant, anti-wrinkles and tyrosinase inhibitory activities of cocoa pod extract. BMC complementary and alternative medicine, 14(1), 1-13.

Kassem, M. G., Ahmed, A. M. M., Abdel-Rahman, H. H., & Moustafa, A. H. (2019). Use of Span 80 and Tween 80 for blending gasoline and alcohol in spark ignition engines. Energy Reports, 5, 221-230.

Kedare, S. B., & Singh, R. P. (2011). Genesis and development of DPPH method of antioxidant assay. Journal of food science and technology, 48(4), 412-422.

Khalil, H. A., Hossain, M. S., Rosamah, E., Azli, N. A., Saddon, N., Davoudpoura, Y., ... & Dungani, R. (2015). The role of soil properties and it's interaction towards quality plant fiber: A review. Renewable and Sustainable Energy Reviews, 43, 1006-1015.

Khan, S., Baboota, S., Ali, J., Khan, S., Narang, R. S., & Narang, J. K. (2015). Nanostructured lipid carriers: an emerging platform for improving oral bioavailability of lipophilic drugs. International journal of pharmaceutical investigation, 5(4), 182.

Kilama, G., Lating, P. O., Byaruhanga, J., & Biira, S. (2019). Quantification and characterization of cocoa pod husks for electricity generation in Uganda. Energy, Sustainability and Society, 9(1), 1-11.

Kim, B., Cho, H. E., Moon, S. H., Ahn, H. J., Bae, S., Cho, H. D., & An, S. (2020). Transdermal delivery systems in cosmetics. Biomedical Dermatology, 4(1), 1-12.

Kim, J., Lee, K. W., & Lee, H. J. (2011). Cocoa (Theobroma cacao) seeds and phytochemicals in human health. In Nuts and seeds in health and disease prevention (pp. 351-360). Academic Press. https://doi.org/10.1016/B978-0-12-375688-6.10042-8

Kob, W., Sciortino, F., & Tartaglia, P. (2000). Aging as dynamics in configuration space. EPL (Europhysics Letters), 49(5), 590.

Kolarsick, P. A., Kolarsick, M. A., & Goodwin, C. (2011). Anatomy and physiology of the skin. Journal of the Dermatology Nurses' Association, 3(4), 203-213.

Kurutas, E. B. (2015). The importance of antioxidants which play the role in cellular response against oxidative/nitrosative stress: current state. Nutrition journal, 15(1), 1-22.

Levillain, A., Orhant, M., Turquier, F., & Hoc, T. (2016). Contribution of collagen and elastin fibers to the mechanical behavior of an abdominal connective tissue. Journal of the mechanical behavior of biomedical materials, 61, 308-317.

Liguori, I., Russo, G., Curcio, F., Bulli, G., Aran, L., Della-Morte, D., ... & Abete, P. (2018). Oxidative stress, aging, and diseases. Clinical interventions in aging, 13, 757.

Lopez-Ojeda, W., Pandey, A., Alhajj, M., & Oakley, A. M. (2020). Anatomy, Skin (Integument). StatPearls [Internet].

Lu, B., Huang, Y., Chen, Z., Ye, J., Xu, H., Chen, W., & Long, X. (2019). Niosomal nanocarriers for enhanced skin delivery of quercetin with functions of anti-tyrosinase and antioxidant. Molecules, 24(12), 2322.

Matsumoto, T., Ikuta, N., Mori, M., & Nagayama, K. (2010). Mechanics of wrinkle formation: micromechanical analysis of skin deformation during wrinkle formation in ultraviolet-irradiated mice. Skin Research and Technology, 16(2), 179-189.

Miranda, M., Cardoso, C., & Vitorino, C. (2020). Fast Screening Methods for the Analysis of Topical Drug Products. Processes, 8(4), 397.

Moghassemi, S., & Hadjizadeh, A. (2014). Nano-niosomes as nanoscale drug delivery systems: an illustrated review. Journal of controlled release, 185, 22-36.

Mumtaz, S., Ali, S., Tahir, H. M., Kazmi, S. A. R., Shakir, H. A., Mughal, T. A., ... & Farooq, M. A. (2021). Aging and its treatment with vitamin C: a comprehensive mechanistic review. Molecular Biology Reports, 1-13.

Mu'nisa, A., Pagarra, H., & Maulana, Z. (2018). Active compounds extraction of cocoa pod husk (Thebroma cacao L.) and potential as fungicides. In Journal of physics: Conference series (Vol. 1028, No. 1, p. 012013). IOP Publishing.

Nguyen, V. T., Tran, T. G., & Tran, N. L. (2021). Phytochemical compound yield and antioxidant activity of cocoa pod husk (Theobroma cacao L.) as influenced by different dehydration conditions. Drying Technology, 1-13.

Nowroozi, F., Almasi, A., Javidi, J., Haeri, A., & Dadashzadeh, S. (2018). Effect of surfactant type, cholesterol content and various downsizing methods on the particle size of niosomes. Iranian journal of pharmaceutical research: IJPR, 17(Suppl2), 1.

Padayatty, S. J., Katz, A., Wang, Y., Eck, P., Kwon, O., Lee, J. H., ... & Levine, M. (2003). Vitamin C as an antioxidant: evaluation of its role in disease prevention. Journal of the American college of Nutrition, 22(1), 18-35.

Papakonstantinou, E., Roth, M., & Karakiulakis, G. (2012). Hyaluronic acid: A key molecule in skin aging. Dermato-endocrinology, 4(3), 253-258.

Pardridge, W. M. (2012). Drug transport across the blood–brain barrier. Journal of cerebral blood flow & metabolism, 32(11), 1959-1972.

Patel, K. K., Kumar, P., & Thakkar, H. P. (2012). Formulation of niosomal gel for enhanced transdermal lopinavir delivery and its comparative evaluation with ethosomal gel. AAPS pharmscitech, 13(4), 1502-1510.

Payum, T., Das, A. K., Shankar, R., Tamuly, C., & Hazarika, M. (2014). Antioxidant potential of solanum spirale shoot and berry: a medicinal food plant used in Arunachal Pradesh. American Journal of Pharmatech Research, 5(4), 307-314.

Pierre, M. B. R., & Costa, I. D. S. M. (2011). Liposomal systems as drug delivery vehicles for dermal and transdermal applications. Archives of dermatological research, 303(9), 607-621. https://doi.org/10.1007/s00403-011-1166-4

Pittayapruek, P., Meephansan, J., Prapapan, O., Komine, M., & Ohtsuki, M. (2016). Role of matrix metalloproteinases in photoaging and photocarcinogenesis. International journal of molecular sciences, 17(6), 868.

Polychniatou, V., & Tzia, C. (2014). Study of formulation and stability of co-surfactant free water-in-olive oil nano-and submicron emulsions with food grade non-ionic surfactants. Journal of the American Oil Chemists' Society, 91(1), 79-88.

Pullar, J. M., Carr, A. C., & Vissers, M. (2017). The roles of vitamin C in skin health. Nutrients, 9(8), 866.

Rahim, I., Nasruddin, A., Kuswinanti, T., Asrul, L., & Rasyid, B. (2018). Utilization of cocoa pod husk waste composting by tremella sp and pleurotus sp as a medium to growth of cocoa seedling. In IOP Conference Series: Earth and Environmental Science (Vol. 156, No. 1, p. 012012). IOP Publishing.

Ratnavathi, C. V., & Komala, V. V. (2016). Sorghum grain quality. In Sorghum biochemistry (pp. 1-61). Academic Press.

Ribeiro, A. S., Estanqueiro, M., Oliveira, M. B., & Sousa Lobo, J. M. (2015). Main benefits and applicability of plant extracts in skin care products. Cosmetics, 2(2), 48-65. https://doi.org/10.3390/cosmetics2020048

Rojo-Poveda, O., Barbosa-Pereira, L., Zeppa, G., & Stévigny, C. (2020). Cocoa bean shell—a by-product with nutritional properties and biofunctional potential. Nutrients, 12(4), 1123. https://doi.org/10.3390/nu12041123

Safitri, F. I., Nawangsari, D., & Febrina, D. (2021, January). Overview: Application of Carbopol 940 in Gel. In International Conference on Health and Medical Sciences (AHMS 2020) (pp. 80-84). Atlantis Press.

Schagen, S. K., Zampeli, V. A., Makrantonaki, E., & Zouboulis, C. C. (2012). Discovering the link between nutrition and skin aging. Dermato-endocrinology, 4(3), 298-307.

Sharma, V., Anandhakumar, S., & Sasidharan, M. (2015). Self-degrading niosomes for encapsulation of hydrophilic and hydrophobic drugs: an efficient carrier for cancer multi-drug delivery. Materials Science and Engineering: C, 56, 393-400.

Sheraz, M. A., Khan, M. F., Ahmed, S. O. F. I. A., Kazi, S. H., & Ahmad, I. Q. B. A. L. (2015). Stability and stabilization of ascorbic acid. Househ. Pers. Care Today, 10, 22-25.

Sidbury, R. (2018). Newborn Skin Development: Structure and Function. In Avery's Diseases of the Newborn (pp. 1468-1474). Elsevier.

Sjövall, P., Skedung, L., Gregoire, S., Biganska, O., Clément, F., & Luengo, G. S. (2018). Imaging the distribution of skin lipids and topically applied compounds in human skin using mass spectrometry. Scientific reports, 8(1), 1-14.

Sumaiyah, S. S., Masfria, M. M., & Dalimunthe, A. (2018). Determination of total phenolic content, total flavonoid content, and antimutagenic activity of ethanol extract nanoparticles of rhaphidophora pinnata (Lf) schott leaves. Rasayan Journal of Chemistry, 11(2), 505-10.

Telang, P. S. (2013). Vitamin C in dermatology. Indian dermatology online journal, 4(2), 143.

Trommer, H., & Neubert, R. H. H. (2006). Overcoming the stratum corneum: the modulation of skin penetration. Skin pharmacology and physiology, 19(2), 106-121.

Tungmunnithum, Duangjai, Areeya Thongboonyou, Apinan Pholboon, and Aujana Yangsabai. "Flavonoids and other phenolic compounds from medicinal plants for pharmaceutical and medical aspects: An overview." Medicines 5, no. 3 (2018): 93.

Vu, M. T., Le, N. T. T., Pham, T. L. B., Nguyen, N. H., & Nguyen, D. H. (2020). Development and characterization of soy lecithin liposome as potential drug carrier systems for codelivery of letrozole and paclitaxel. Journal of Nanomaterials, 2020.

Yaghoobian, M., Haeri, A., Bolourchian, N., Shahhosseni, S., & Dadashzadeh, S. (2020). The impact of surfactant composition and surface charge of niosomes on the oral absorption of repaglinide as a BCS II model drug. International Journal of Nanomedicine, 15, 8767.

Yahya, M., Ginting, B., & Saidi, N. (2021). In-Vitro Screenings for Biological and Antioxidant Activities of Water Extract from Theobroma cacao L. Pod Husk: Potential Utilization in Foods. Molecules, 26(22), 6915.

Yeo, L. K., Chaw, C. S., & Elkordy, A. A. (2019). The effects of hydration parameters and co-surfactants on methylene blue-loaded niosomes prepared by the thin film hydration method. Pharmaceuticals, 12(2), 46.

Yousef, H., Alhajj, M., & Sharma, S. (2017). Anatomy, skin (integument), epidermis.

Yoshioka, T., Sternberg, B., & Florence, A. T. (1994). Preparation and properties of vesicles (niosomes) of sorbitan monoesters (Span 20, 40, 60 and 80) and a sorbitan triester (Span 85). International journal of pharmaceutics, 105(1), 1-6.

Yusof, F., Khanahmadi, S., Amid, A., & Mahmod, S. S. (2016). Cocoa pod husk, a new source of hydrolase enzymes for preparation of cross-linked enzyme aggregate. Springerplus, 5(1), 1-18.

Zhang, H. (2017). Thin-film hydration followed by extrusion method for liposome preparation. In Liposomes (pp. 17-22). Humana Press, New York, NY.

Zhang, P., Martin, M., Michalek, S. M., & Katz, J. (2005). Role of mitogen-activated protein kinases and NF-κB in the regulation of proinflammatory and anti-inflammatory cytokines by Porphyromonas gingivalis hemagglutinin B. Infection and immunity, 73(7), 3990-3998.

Zheng, Y., Ouyang, W. Q., Wei, Y. P., Syed, S. F., Hao, C. S., Wang, B. Z., & Shang, Y. H. (2016). Effects of Carbopol® 934 proportion on nanoemulsion gel for topical and transdermal drug delivery: a skin permeation study. International Journal of Nanomedicine, 11, 5971.