

## REFERENCES

- Arezki, N. R., Williams, A. C., Cobb, A. J., & Brown, M. B. (2016). Design, synthesis and characterization of linear unnatural amino acids for skin moisturization. *International Journal of Cosmetic Science*, 39(1), 72–82. <https://doi.org/10.1111/ics.12351>
- Bouwstra, J. A., Groenink, H. W., Kempenaar, J. A., Romeijn, S. G., & Ponec, M. (2008). Water distribution and natural moisturizer factor content in human skin equivalents are regulated by environmental relative humidity. *Journal of Investigative Dermatology*, 128(2), 378–388. <https://doi.org/10.1038/sj.jid.5700994>
- Brunelle, E., Huynh, C., Le, A. M., Halámková, L., Agudelo, J., & Halámek, J. (2016). New Horizons for ninhydrin: Colorimetric determination of gender from fingerprints. *Analytical Chemistry*, 88(4), 2413–2420. <https://doi.org/10.1021/acs.analchem.5b04473>
- Buraczewska, I., Berne, B., Lindberg, M., Lodén, M., & Törmä, H. (2008). Long-term treatment with moisturizers affects the mRNA levels of genes involved in keratinocyte differentiation and desquamation. *Archives of Dermatological Research*, 301(2), 175–181. <https://doi.org/10.1007/s00403-008-0906-6>
- Carillo, P., & Gibon, Y. (2011, January). *Protocol: Extraction and determination of proline*. ResearchGate. Retrieved August 29, 2021, from [https://www.researchgate.net/publication/211353600\\_PROTOCOL\\_Extraction\\_and\\_determination\\_of\\_proline](https://www.researchgate.net/publication/211353600_PROTOCOL_Extraction_and_determination_of_proline).
- Chu, D.H. (2008). Overview of biology, development, and structure of skin. In K. Wolff, L.A. Goldsmith, S.I. Katz, B.A. Gilchrest, A.S. Paller, & D.J. Leffell (Eds.), *Fitzpatrick's dermatology in general medicine* (7th ed., pp. 57–73). New York: McGraw-Hill.
- Dapic, I., Jakasa, I., Yau, N. L., Kezic, S., & Kammeyer, A. (2013). Evaluation of an HPLC method for the determination of natural moisturizing factors in the human stratum corneum. *Analytical Letters*, 46(14), 2133–2144. <https://doi.org/10.1080/00032719.2013.789881>

- Dong M. & Llanas, A. (2013). The Essence of Modern HPLC: Advantages, Limitations, Fundamentals, and Opportunities. *Lc Gc North America*. 31. 472.
- Dreher, F., & Maibach, H. I. (2006). Stratum Corneum Tape Stripping: Relationship with Dry Skin and Moisturizers. In Lodén Marie & H. I. Maibach (Eds.), *DRY SKIN and MOISTURIZERS Chemistry and Function* (2nd ed., Ser. DERMATOLOGY: CLINICAL & BASIC SCIENCE SERIES, pp. 457–464). essay, Taylor & Francis Group.
- Fowler, J. (2012, July). Understanding the Role of Natural Moisturizing Factor in Skin Hydration [web log]. Retrieved November 11, 2021, from <https://practicaldermatology.com/articles/2012-jul/understanding-the-role-of-natural-moisturizing-factor-in-skin-hydration>.
- Friedman, M. (2004). Applications of the Ninhydrin reaction for analysis of amino acids, peptides, and proteins to agricultural and Biomedical Sciences. *Journal of Agricultural and Food Chemistry*, 52(3), 385–406. <https://doi.org/10.1021/jf030490p>
- Gunnarsson, M., Mojumdar, E. H., Topgaard, D., & Sparr, E. (2021). Extraction of natural moisturizing factor from the stratum corneum and its implication on skin molecular mobility. *Journal of Colloid and Interface Science*, 604, 480–491. <https://doi.org/10.1016/j.jcis.2021.07.012>
- Harding, C. R., & Rawlings, A. V. (2006). Effects of Natural Moisturizing Factor and Lactic Acid Isomers on Skin Function. In Lodén Marie & H. I. Maibach (Eds.), *DRY SKIN and MOISTURIZERS Chemistry and Function* (2nd ed., Ser. DERMATOLOGY: CLINICAL & BASIC SCIENCE SERIES, pp. 187–209). essay, Taylor & Francis Group.
- Harding, C. R., & Scott, I. R. (2002). Stratum Corneum Moisturizing Factors. In J. Leyden & A. Rawlings (Eds.), *Skin moisturization* (Vol. 25, Ser. The Cosmetic Science and Technology, pp. 61–80). essay, Marcel Dekker.
- Hoppe, T. S. (2013). *Skin barrier function and mRNA expression profiles in patients with atopic dermatitis, ichthyosis vulgaris, and X-linked recessive ichthyosis aetiopathogenic differences and the impact of moisturizing treatment* (dissertation). Acta Universitatis Upsaliensis, Uppsala.

Hughes, A. J., Tawfik, S. S., Baruah, K. P., O'Toole, E. A., & O'Shaughnessy, R. F. (2021). Tape strips in dermatology research\*. *British Journal of Dermatology*, 185(1), 26–35.  
<https://doi.org/10.1111/bjd.19760>

Jemec, G. B. E. (2006). Moisturizers as a Medical, Biological, Psychological, Cultural, and Economic Factor. In Lodén Marie & H. I. Maibach (Eds.), *DRY SKIN and MOISTURIZERS Chemistry and Function* (2nd ed., Ser. DERMATOLOGY: CLINICAL & BASIC SCIENCE SERIES, pp. 149–154). essay, Taylor & Francis Group.

Jiang, L. (2015). Review: Cosmeceutical Potential of Chinese Skullcap (*Scutellaria Baicalensis*). *GLOBAL JOURNAL FOR RESEARCH ANALYSIS*, 4(7), 132–133.  
<https://doi.org/https://doi.org/10.36106/gjra>

Jones, D., Owen, A. G., & Farrar, J. F. (2002). Simple method to enable the high resolution determination of total free amino acids in soil solutions and soil extracts. *Soil Biology and Biochemistry*, 34(12), 1893–1902. [https://doi.org/10.1016/s0038-0717\(02\)00203-1](https://doi.org/10.1016/s0038-0717(02)00203-1)

Kezic, S., Kammeyer, A., Calkoen, F., Fluhr, J. W., & Bos, J. D. (2009). Natural moisturizing factor components in the stratum corneum as biomarkers of Filaggrin genotype: Evaluation of Minimally Invasive Methods. *British Journal of Dermatology*, 161(5), 1098–1104.  
<https://doi.org/10.1111/j.1365-2133.2009.09342.x>

Kim, E., Hwang, K., Lee, J., Han, S., Kim, E.-M., Park, J., & Cho, J. (2018). Skin protective effect of epigallocatechin gallate. *International Journal of Molecular Sciences*, 19(1), 173.  
<https://doi.org/10.3390/ijms19010173>

Koppes, S. A., Brans, R., Ljubojevic Hadzavdic, S., Frings-Dresen, M. H. W., Rustemeyer, T., & Kezic, S. (2016). Stratum corneum tape stripping: Monitoring of inflammatory mediators in atopic dermatitis patients using topical therapy. *International Archives of Allergy and Immunology*, 170(3), 187–193. <https://doi.org/10.1159/000448400>

- Lademann, J., Jacobi, U., Surber, C., Weigmann, H.-J., & Fluhr, J. W. (2009). The tape stripping procedure – evaluation of some critical parameters. *European Journal of Pharmaceutics and Biopharmaceutics*, 72(2), 317–323. <https://doi.org/10.1016/j.ejpb.2008.08.008>
- Light, D. (2009). Skin: An Exemplary Organ. In *Cells, tissues and skin* (Ser. YOUR BODY How It Works, pp. 92–103). essay, Chelsea House Publishers.
- Lees, M. (2012). Advanced Anatomy and Physiology of the Skin. In *Skin care: Beyond the basics* (4th ed., pp. 1–20). essay, Cengage Learning/Milady.
- Miller, D. L. (2006). Application of Adhesive Techniques to Harvest Stratum Corneum Material. In J. Serup, G. B. E. Jemec, & G. L. Grove (Eds.), *Handbook of non-invasive methods and the skin* (2nd ed., pp. 371–374). essay, CRC/Taylor & Francis.
- Menon, G., & Norlén, L. (2002). Stratum Corneum Ceramides and Their Role in Skin Barrier Function. In J. Leyden & A. Rawlings (Eds.), *Skin moisturization* (Vol. 25, Ser. The Cosmetic Science and Technology, pp. 31–60). essay, Marcel Dekker.
- Mo, Y., Wan, R., & Zhang, Q. (2012). Application of reverse transcription-PCR and real-time PCR in nanotoxicity research. *Methods in molecular biology* (Clifton, N.J.), 926, 99–112. [https://doi.org/10.1007/978-1-62703-002-1\\_7](https://doi.org/10.1007/978-1-62703-002-1_7)
- Ogawa, Y., Kinoshita, M., Shimada, S., & Kawamura, T. (2018). Zinc in keratinocytes and Langerhans cells: Relevance to the epidermal homeostasis. *Journal of Immunology Research*, 2018, 1–11. <https://doi.org/10.1155/2018/5404093>
- Petraco, N. D. K., Proni, G., Jackiw, J. J., & Sapse, A.-M. (2006). Amino acids alanine reactivity with the fingerprint reagent Ninhydrin. A detailed ab initio computational study. *Journal of Forensic Sciences*, 51(6), 1267–1275. <https://doi.org/10.1111/j.1556-4029.2006.00271.x>
- Ratz-lyko, A., Arct, J., & Pytkowska, K. (2016). Moisturizing and antiinflammatory properties of cosmetic formulations containing *Centella asiatica* extract. *Indian Journal of Pharmaceutical Sciences*, 78(1), 27. <https://doi.org/10.4103/0250-474x.180247>

- Rawlings, A. V., & Harding, C. R. (2004). Moisturization and skin barrier function. *Dermatologic Therapy*, 17(s1), 43–48. <https://doi.org/10.1111/j.1396-0296.2004.04s1005.x>
- Sandilands, A., Sutherland, C., Irvine, A. D., & McLean, W. H. (2009). Filaggrin in the frontline: Role in skin barrier function and disease. *Journal of Cell Science*, 122(9), 1285–1294. <https://doi.org/10.1242/jcs.033969>
- Sethi, A., Kaur, T., Malhotra, S. K., & Gambhir, M. L. (2016). Moisturizers: The Slippery Road. *Indian journal of dermatology*, 61(3), 279–287. <https://doi.org/10.4103/0019-5154.182427>
- Stern, R. (2006). Hyaluronan: Key to Skin Moisture. In Lodén Marie & H. I. Maibach (Eds.), *DRY SKIN and MOISTURIZERS Chemistry and Function* (2nd ed., Ser. DERMATOLOGY: CLINICAL & BASIC SCIENCE SERIES, pp. 457–464). essay, Taylor & Francis Group.
- Sui, H., Chen, L., Han, X. X., Zhang, X., Wang, X., & Zhao, B. (2017). Quantitative determination of total amino acids based on surface-enhanced Raman scattering and Ninhydrin derivatization. *Analytical Sciences*, 33(1), 53–57. <https://doi.org/10.2116/analsci.33.53>
- Sun, S.-W., Lin, Y.-C., Weng, Y.-M., & Chen, M.-J. (2006). Efficiency improvements on NINHYDRIN method for amino acids quantification. *Journal of Food Composition and Analysis*, 19(2-3), 112–117. <https://doi.org/10.1016/j.jfca.2005.04.006>
- Wohlrab, J., & Kreft, D. (2014). Niacinamide - mechanisms of action and its topical use in dermatology. *Skin Pharmacology and Physiology*, 27(6), 311–315. <https://doi.org/10.1159/000359974>
- Wu, X.-bo, Luo, X.-qin, Gu, S.-ying, & Xu, J.-hong. (2012). The effects of Polygonum cuspidatum extract on wound healing in rats. *Journal of Ethnopharmacology*, 141(3), 934–937. <https://doi.org/10.1016/j.jep.2012.03.040>
- Yao, Z., Moy, R., Allen, T., & Jansen, B. (2017). An adhesive patch-based skin biopsy device for molecular diagnostic and skin microbiome studies. *Journal of the American Academy of Dermatology*, 16(10), 979–986.