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Book Review

DRY SKIN AND MOISTURIZERS: CHEMISTRY AND FUNCTION, 2ND ED., Marie Loden and Howard Maibach, Eds. (Taylor & Francis imprint, CRC Press, Boca Raton, FL, 2006), 543 pp., $149.95.

Dry Skin and Moisturizers: Chemistry and Function is compilation of chapters written by international experts in the field to cover the biochemistry and function of the skin, hyperkeratotic skin conditions, the use of specialized ingredients and their interaction with the skin, instrumental measurements pertaining to skin moisturization, and specialized skin reactions. The 543-page book is printed in black and white with some gray-tone figures. It is an excellent reference for the novice cosmetic chemist who wishes to get a broad overview of the etiology of dry skin and the basic active moisturizing ingredients. It does not discuss moisturizer formulation.

The text opens with a thorough discussion of the skin barrier, comparing the three basic stratum corneum models (brick and mortar, domain mosaic, and single gel) and continues on to classify the epidermal lipids. Chapter 5 presents the use of particle probes to analyze calcium, zinc, and iron levels in the skin, focusing on the importance of calcium in preprogrammed cell death. The topic of calcium signaling for barrier repair is further presented in Chapter 6. The discussion then turns to renewal of the skin through desquamation, with chapters on ichthyosis, atopic dermatitis, photoaged skin, and psoriasis.

The next section of the book discusses the use of proteases, lactic acid, urea, glycerol, hyaluronan, petrolatum, phospholipids, essential fatty acids, sphingolipids, and vitamins in moisturizers. One detailed chapter is devoted to each of these topics. It would have been fitting to have an author write a summary chapter discussing how each of these ingredients might fit into an overall final formulation. The major problem with moisturizer formulation is that not all beneficial ingredients can be placed into one product, thus creating confusion.

The text closes with chapters on noninvasive skin assessment, including analysis techniques for skin smoothness, moisturization, squamometry, and barrier function. Finally, sensitive skin, irritating substances, and sensitizing substances are discussed. One final regulatory chapter on the safety of skin moisturizers is included.

The book is cohesive and well organized. It is nicely printed and well bound, making it a lasting addition to a library collection. This is the second edition of the text, which was originally published five years ago. The update is current and timely, except in the areas of botanicals and cosmeceutical moisturizer ingredients. These discussions are of ingredients that have withstood the test of time, avoiding the fads of the moment. This makes the book a valuable reference for both industry and the dermatologist.—**ZOE DIANA DRAELOS**—*Dermatology Consulting Services*