

Center for Dermal Research

Innovations in Dermatological Sciences Conference 2023



Roger L. McMullen, Ph.D.

Dr. Roger McMullen has over 20 years of experience in the personal care industry with specialties in optics, imaging, and spectroscopy of hair and skin. Currently, he is a Principal Scientist at Ashland, LLC and leads the Material Science team in the Measurement Science department. Roger has over 30 publications in peer-reviewed journals and textbooks. He is also the author of *Antioxidants and the Skin*, 2nd edition and founded the online news magazine

The Cosmetic Chemist. Roger received a B.S. in Chemistry from Saint Vincent College and completed his Ph.D. in Biophysical Chemistry from Seton Hall University.

Roger actively engages and participates in educational activities in the personal care industry. He frequently teaches continuing education courses for the SCC and TRI-Princeton. In addition, Roger is an Adjunct Professor at Fairleigh Dickinson University and teaches Biochemistry to students pursuing M.S. degrees in Cosmetic Science and Pharmaceutical Chemistry. Prior to pursuing a career in science, Roger served in the U.S. Navy for four years on board the USS YORKTOWN (CG 48). He is fluent in Spanish and Catalan and currently is learning to play the classical guitar.

“Advances in Antioxidant Technology for Skin Care”

Abstract

In the last two decades the role of antioxidants in skin care has radically changed. In the early 2000s, it was typical to find finished formulas on the shelf that contained butylated hydroxytoluene (BHT) or butylated hydroxyanisole (BHA), which were mostly added to enhance the shelf-life of the product. As time went on, formulas containing vitamin C and vitamin E (alpha-tocopherol) became more common since many studies carried out during that period demonstrated the invaluable benefits provided to the skin by these antioxidants.

As the personal care industry entered the end of the first decade in the new millennium, naturally derived ingredients started to become more and more common. Of course, most of these ingredients were based on botanical ingredients, which are chock-full of polyphenols and other ingredients with antioxidant properties. Antioxidants have also become key components of sunscreen formulas, as research demonstrated unique benefits from the addition of antioxidants in addition to any UV absorption properties.

A great deal of research has also gone into delivery systems for antioxidants, which provide targeted delivery and stability for antioxidants. Nowadays, one can find antioxidants in just about every type of skin care product in the marketplace. In this presentation, we will review some of the latest advances in antioxidant technology in the skin care arena.