

THE DEFINITION OF "COSMECEUTICAL"*

BY RAYMOND E. REED*

WE WISH to thank you and the SOCIETY for this Medal Award. By means of that word "we," I hope to embrace all the people whose shadows surround me here tonight—the people who have made this occasion possible. Fortunately, many of these people—my co-medalists—are here with us this evening. I only wish it were practical, from a time standpoint, to introduce them individually and detail their contributions to my life. I can only say to all of them that I have never been more conscious of my great personal indebtedness to them for their contributions to me over the years. I wish also, on this occasion, to thank The Toni Company and The Gillette Company for their wholehearted support of scientific operations in the cosmetic industry based on philosophies and principles in which I believe so strongly.

I have been instructed by your president that my talk this evening should not be too scientific and, above all, brief. Dr. Plechner, I get the message! You have given me, however, a difficult assignment. For how, in all reason, can an amateur lawyer by exposure, and a scientist by inclination, be brief on a sentimental occasion such as this? Of course, in the direction of not being too scientific, I have unlimited talent, a talent that will become more and more apparent during the next few minutes.

Seriously, there is a problem that confronts scientific people in this wonderful industry of ours that I would like to talk about. It deals with definitions. More specifically, it deals with what is a cosmetic, and what is cosmetic science. I think the time has arrived when we should strive for a better understanding of these terms and what their true meanings should be at this point in the history of our industry.

The challenge that attracted me to the cosmetic industry over thirty years ago was the recognition that the majority of cosmetic products sold in that era were based on art, not science. These formulations—perhaps recipes would be a better word—were empirical in nature, that is, based only on nonscientific observation and experience. Largely, these products delivered benefits of an aesthetic nature to their users. They appealed to the senses.

It was apparent that the application of science to the development of cosmetics should increase materially the benefits delivered by these prod-

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ucts. In other words, just as patent medicines in their day were the forerunners of pharmaceutical products, it seemed to me that cosmetics based essentially on art would evolve into cosmetics based largely on science. And, indeed they have! The amazing thing is that with this transition, no new word has emerged that fairly describes these products or the science that has made them possible.

Many years ago, we coined a word in our company that we felt more aptly applied to the kinds of cosmetics in which we were interested. This word, and it has appealed to me more and more with the passing years, is "cosmeceutical." This word, I believe, more accurately connotes what many modern cosmetics really are—products that are so closely related scientifically to many topical proprietary pharmaceuticals that I have great difficulty distinguishing between the two categories.

Now, let me tell you how I define this word "cosmeceutical":

1. A cosmeceutical is a scientifically-designed product intended for external application to the human body.
2. A cosmeceutical produces a useful, desired result.
3. A cosmeceutical has desirable aesthetic properties.
4. A cosmeceutical meets rigid chemical, physical, and medical standards.

Let's discuss these requirements one by one.

A scientifically designed product to me means that every functional ingredient in the composition has a scientific reason for being. These ingredients, in precise proportions, are combined to produce a product that will deliver the result desired.

The useful, desired result delivered by a cosmeceutical may take different forms, and these are:

- (a) It may produce a discernible physical change in the appearance of an individual.
- (b) It may effect control over certain processes common to human skin and its appendages.
- (c) It may be hygienic in nature, making a contribution to cleanliness and the preservation of the health of the individual.
- (d) It may preserve or enhance the attractiveness and beauty of human beings.
- (e) It may deliver a combination of these effects.

From an aesthetic standpoint, cosmeceuticals are designed to deliver sensory impressions and psycho-sensory benefits to the user. The senses of sight, feel, smell, and taste are commonly involved. The various sensations are generated by the appearance of the product, by the process of application, and by the results obtained. The over-all aesthetic profile that emerges in the user's mind, plays an important role in the acceptability of a cosmeceutical.

From a standard or quality standpoint, cosmeceuticals must be rigidly controlled. Every ingredient in the product, the manufacturing process involved, and the finished product, must meet carefully designed specifications. Medical standards are especially important, for a cosmeceutical must deliver all its benefits without endangering the health of the user.

Another way to put all this is that cosmeceuticals are the work product of scientists drawn from every important branch of chemistry, physics, engineering, and medicine. Organic chemists, biochemists, chemical engineers, medical scientists, and many other scientific specialists, are all involved in cosmeceutical science. Consistent with my definition of a cosmeceutical, this science deals with the control of certain processes that take place in the skin, with the science of the preservation of health and prevention of disease, and generally with the art of preserving or enhancing the appeal, attractiveness and beauty of human beings.

In terms of specific products, as we all know, lipsticks and other make-up items produce a readily discernible physical change in appearance. Hair dyes may also produce such a result. Permanent-waving preparations alter the physical configuration of human hair fibers. Hair sprays and many other cosmeceuticals contribute more subtle, less discernible, but very real physical benefits to the individual. From a skin-process standpoint, cosmeceuticals are effective in controlling such phenomena as the moisture balance of the skin, the generation of perspiration, the acne process, minor inflammatory reactions and dandruff conditions.

Shampoos, cleansing lotions, tooth pastes, mouth washes, beauty bars, bubble baths, and the like, all make hygienic contributions to their users.

In a preventive medical sense, cosmeceuticals tend to prevent sunburn, skin chapping, dental caries, skin infections, and other medical afflictions. As a matter of fact, many dermatologists believe that by protecting the body from excessive exposure to ultraviolet radiation, lipsticks and other cosmeceutical products play an important role in the prevention of lip and skin cancers.

The art of perfumery deserves special mention. Of all our senses, the sense of smell is the sharpest from the standpoint of our human ability to detect the presence of minute amounts of many compounds. Olfactory appeal, therefore, in a cosmeceutical, is of great importance. Perfumes, colognes, and fragrances for cosmeceuticals are elegant examples of products having tremendous aesthetic appeal. Behind such compositions and the art of perfumery, there exists today a substantial scientific foundation that is not adequately appreciated even within our industry. From an organic synthesis standpoint alone, the perfume industry has made many important contributions to the science of cosmeceuticals.

In the field of medicine, according to a recent article in the *Journal of the American Medical Association*, there seems to be a rather strong desire to

limit the definition of cosmetics to materials and procedures used for beautifying appearance and for promoting attractiveness. This article decries the use of chemically and pharmacologically active drugs in cosmetic preparations. Recognizing full well that the incorporation of biologically active materials must impose on these products high standards of medical safety and effectiveness, I see nothing wrong with this procedure. To deny the industry the use of active chemicals and drugs in cosmetics would deny us our very future and our scientific opportunity to increase the contributions of cosmeceuticals to human welfare.

As I see it, the full impact of fundamental research on human skin and skin processes now going on in many industrial laboratories, has yet to be felt by our industry. It will be felt in the form of new compounds that will improve the functional properties of cosmeceuticals and increase the benefits that the consumer derives from their use. It will be felt in the form of a better understanding of the mechanisms behind the processes that go on in this remarkable organ we call the human skin. This work, carried out with doctors of medicine playing a prominent role, can make great contributions to the fields of dermatology, dental science, public health, and medicine in general. I see no reason why scientists and other specialists working in and for the cosmeceutical industry cannot provide many more important future scientific break-throughs just as similar talents have done in connection with drugs and pharmaceutical preparations. I repeat, these contributions must take the form of being safe, intelligent applications of new compounds and new knowledge to the science of cosmeceuticals. The use of some of these compounds, by the way, may well require the supervision of a doctor of medicine. I predict, however, that most of them, by design and selection, will be so safe that they will properly become proprietary cosmeceuticals.

In conclusion, I should like to thank the Society of "Cosmeceutical" Chemists for this attractive medal. My thanks also to the Society's officers, members, and guests, with special thanks to "Dr." Leibman and "Judge" Harris. Oh yes, although I indicated at the beginning of my talk that time would not permit me to introduce any of my co-medalists, I find I have a moment left and I should like to make one exception. This co-medalist has made the greatest contributions to my life. By sheer coincidence, this co-medalist is a living exemplification of a cosmeceutical:

This co-medalist is scientifically inclined.

This co-medalist delivers a useful, desired result.

This co-medalist, I believe, has aesthetic appeal.

This co-medalist meets reasonable quality standards.

May I present Mrs. Reed.