

EDUCATIONAL REQUIREMENTS OF COSMETIC CHEMISTS*

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MORE THAN twenty-five years have elapsed since the writer of this paper undertook to offer special courses of instruction in the composition, manufacture, and action of toilet preparations given as extension courses in the form of evening classes in the Columbia University College of Pharmacy.

In so far as the writer is aware, this was the first attempt at systematic instruction in the subject of cosmetics in any university or college in the United States. Indeed, the writer was often given to understand by certain administration officials, that such instruction was not entirely desirable since the subject of cosmetics was then looked upon with slight suspicion as not sufficiently dignified to be included in the subjects taught by a great institution. The implication was that the black deed of a Mme. Toffana or of the Marquise de Brinvilliers who taught the ladies of the Middle Ages, in five easy lessons, how to poison their husbands with cosmetic preparations, had not yet

been forgotten, or, that the finger of scorn pointed to the girl who rouged her lips or dyed her hair.

We have come a long way since the days of thirty years ago. The cosmetics industry has grown by leaps and bounds; it occupies a most respected place in the economy of our nation; no longer is a secondary position assigned to it in the estimation of business or scientific circles.

The reasons for the remarkable change in the opinion of the public concerning cosmetic work and cosmetic preparations are too numerous to be discussed at this opportunity, but at least one cause is pertinent to my discussion. Manufacturers of cosmetics saw fit, either by compulsion owing to governmental regulations or by voluntary action, to place the preparation of their products under the supervision of trained chemists and allotted to them, or to scientific institutions, sums of money for research, expecting from these steps improvement of their products in composition, manufacture, appearance and, last but not least, in effectiveness. In this expectancy

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they were certainly not disappointed, for the products of today are so far superior to those marketed thirty years ago that there is simply no comparison. Yet, there is always room for improvement and advancement. New compounds with new actions are discovered in large numbers; their uses for cosmetic purposes must be investigated. In cosmetics, we have a large field of possibilities with every promise of success, not to mention the financial rewards which are sure to follow.

Having made the point that chemists or persons with training along chemical or pharmaceutical lines have been and will be of prime necessity in advancing the cosmetic industries' interests, let us discuss the question: "Just what training should a cosmetic chemist have in order to serve his industry best."

I hope you will not feel offended when I say that in my opinion there is no such thing as a "cosmetic" chemist at present. Of course, there is the question of definition, but I venture to say that no one here has a degree from a reputable teaching institution in which the term "cosmetic" appears. So, the only definition of cosmetic chemist is: a person trained in chemistry and using his training in some phase of cosmetic endeavor. Moreover, I am quite sure when I say that practically all of you now employed in cosmetic factories had to acquire the knowledge of cosmetics requisite to your job by your own effort in a sort of apprenticeship. This is in no way your fault, but it is due to a lack of sys-

tematic instruction in our teaching institutions in the field of cosmetic science. It is admitted that in some pharmacy colleges an effort is made to include in their laboratory instruction the preparation of a few cosmetics, but nowhere, to my knowledge, is a *comprehensive* course of lectures and laboratory work offered on this subject. Unfortunately, colleges of pharmacy as well as schools of chemistry have overburdened curricula already and cannot add new subjects except upon the deletion of other important courses of instruction. The faculties of these teaching institutions are constantly confronted with the question as to what should be included and what should be deleted from their instruction. Pharmacy colleges are, in addition, subject to restrictions imposed by their membership in the American Association of Colleges of Pharmacy, which association demands the observance of definite minimum hours of instruction in the various subjects required to be taught.

In the last proposed syllabus of instruction in pharmacy, the subject of cosmetics was mentioned as an elective subject, but that syllabus has now been abandoned; moreover, the time and contents of that proposed instruction was entirely insufficient in my opinion. It appears, therefore, that in so far as thorough and systematic instruction in the field of cosmetic science is concerned, there is a complete lack. The person who is earnestly desirous of working in that field is left

largely to himself for the necessary information.

There is no doubt that instruction in the field is desirous and needed. A few years ago, the writer had the opportunity to offer a course in cosmetics in our college as an elective, electives in other subjects being offered at the same time. Of the number of students entitled to choose, nearly 90 per cent chose the cosmetics elective—it was really embarrassing. The following year, the electives were again abolished.

The evening course given by myself for the past twenty-five years had attendances varying from twenty-five students as a minimum to sixty-five students as a maximum. They were purely technical courses requiring no preliminary education of any great extent. Nevertheless, the course was useful and appreciated as the testimony and expressions of numerous students showed whose degrees varied from a Ph.D. through Ph.G. on down to merely a high school education with no degree.

A thorough course of instruction in cosmetics science is at present non-existent; the institution of it is a virgin task.

In connection with it are many problems that must be solved. First of all, what material should be included? Should the course be of undergraduate or graduate caliber? Just what preliminary subjects should be required? Should it be given in a chemistry or a pharmacy college? Should a distinctive degree, such as B.S. in Cosmetic

Science or a Ph.D. be awarded? How many hours of lecture and laboratory work should be demanded? Should research be a part of the work? Is there in existence a textbook suitable as a guide for students? These questions and many others will have to be answered. In many instances the answer will not be easy to make.

It would seem at first thought that a pharmaceutical training offers the best preparation for a career in cosmetics, but certain subjects which to me seem necessary for an understanding of cosmetics, notably physical chemistry and colloid chemistry, are not included in that curriculum. On the other hand, the chemistry school does not concern itself with the manufacture of preparations such as ointments, lotions, creams, etc., and many graduates in chemistry who came under my observation were quite helpless when proceeding with the preparation of even the simplest medicinal mixture. Many had never heard of the United States Pharmacopoeia, the National Formulary, or Dispensatory.

It appears, therefore, that the courses of instruction for a cosmetic chemist should be selected in part from those offered in the pharmaceutical curriculum and part from the chemistry curriculum.

As to undergraduate or graduate work, I see no objection to a B.S. in Cosmetics Science, given in a university for a five- or six-year course, either in the pharmacy or chemistry department with the choice of going

forward to a Ph.D. in cosmetic research.

It may be well to advance the thought that someone in the cosmetics industry endow a chair for cosmetic instruction in one of our great institutions of learning; or even, that the industry found and support an American Institute of Cosmetics for purposes of learning and research. The possibilities are unlimited.

But somewhere the job must be started. I venture to suggest that your organization has an outstanding interest in the matter. Why not consider the advisability of appointing an educational committee from your members to take up the educational requirements of a cosmetic chemist, map a course of instruction,

define his status, arrange for the publication of a suitable textbook, and, then use your influence and that of other persons to impress upon our universities or other institutions the importance of offering such courses of instruction.

Can you not visualize the tremendous service that such a procedure would render to the entire cosmetic industry? It would certainly enhance your standing as professional men and place cosmetics on a level with medicine. After all, beauty is dependent upon cleanliness and physical well being. In that sense you are part and parcel of that "House of Health" that the medical and pharmaceutical professions so earnestly are striving to erect and maintain in our great land.