

The question of stating the problems as practical formulas will not always work since there are times when the facts can be better studied if the formula be stated in the theoretical manner. Here again the possible carry-over from the previous subject should not be overlooked. As an example, a formula calling for eye drops of silver nitrate in normal saline solution presents the old qualitative reaction dressed up in a pharmaceutical cloak. And so there are a number of such reactions which might be used as starting points, carrying over into the new work facts learned early in the student's work and therefore more easily brought to mind.

On the other hand, at times student interest can be aroused to a higher pitch if the problem is stated in practical language. Then, too, the actual translation of laboratory experience into practical life is made easier if the applications are kept in mind at all times.

One more important possibility in relation to *Content* of course; since this subject is taught at a time when the basic subjects have been covered, and since the study itself makes use of many of the facts previously learned, the teaching of prescription incompatibilities offers a wonderful opportunity for reviewing a large number of courses. Here again is an opportunity to arrange the work in such a manner as to cover the basic subjects, yet the course should not degenerate into a mere review study.

Method.—Method is the most important of all the factors. A good teacher with a well-worked-out method can present a subject of inferior content and get better results than another instructor blest with a much better course content. And *Method* should be made up of the following phases: the materials, desk space, a text or manual and a goodly supply of teacher's time and energy. This latter cannot be over-stressed for if there is any place in the modern system of instruction where the old-fashioned preceptor method has a place it is in this particular study. A few suggestions as to the best method, a careful supervision of the work, and then a short discussion following the completion of the exercise will do more to assist the student than any other system. Here is where true teaching ability shows; some students need only a small amount of help. Others need very careful and complete supervision, and when possible they should have it. On the other hand they should not be too completely dominated since the loss of independence of action would be very undesirable. Therefore, this feature must be carefully adapted to the individual student.

Under a discussion of *Method*, a very important discussion is that of using the proper formulas. In a previous paper, the use of small amounts of materials was outlined. For the study of the theoretical phases of the subject, this is perhaps the best manner, but as a practical course, the use of "full-sized" formulas is urged. Thus the student is confronted with the problem as he will see it in later work and by solving the laboratory problem he gains the confidence for his future work. This is the important part of the course in Prescription Incompatibilities.

SUGGESTIONS ON TEACHING A COURSE IN INCOMPATIBILITIES.

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It seems there is always some controversy concerning the methods used and their procedure in teaching a course in incompatibilities in prescription writing.

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When one observes the varying results obtained from the compounding of a simple formula, he concludes that there is yet need for a more unified idea concerning that art which is the fundamental act of the practicing pharmacist.

Now that the four-year course in pharmacy is going into effect, a better opportunity for broadening the course in incompatibilities is made possible. Two major arguments, as to how a course of this kind should be taught, are given. There are those who think a course of one lesson an hour a week, in the second year, is sufficient. This one-hour period of course supplemented by a one-hour period of laboratory work. Others reduce the time to one semester's work. In either case there is the fault of the student memorizing the prescriptions to be discussed for that period, only to forget them and take new ones at the next meeting of the class. Here the results are frequently disappointing, since sufficient time has not been given to the subject.

There are those who feel that a more intensive course, consisting of one semester's work having two lecture periods and two laboratory periods a week, be given. In the new four-year course outlined for the pharmacy student this idea seems a better one. The student received a more intensified drilling and is able to recognize and adjust more readily the incompatibilities that are presented.

The number of textbooks written on the subject are few. However, it is not necessary to confine one's teaching to a specific book. In either case the student is given prescriptions and is required to search for all incompatibilities, but compound as written. Having observed the physical and chemical changes involved, he then, upon his own knowledge of these transformations, selects the procedure in compounding that will effect the best result. This without interfering with the chemistry or therapy of the preparation. The two prescriptions are then compared and notes made for the discussion in class. Criticisms should be invited from the fellow students, enabling the instructor to have a better conception concerning the clearness of each problem in the student's mind.

Frequent quizzes might be given. Because in his course in Practical Dispensing the student is daily compounding, he constantly becomes more thoroughly acquainted with the many changes involved in the process of his operation. This, of course, develops him in technique and stimulates in him clearer ideas concerning the art of prescription adjustment.

HOW INCOMPATIBILITIES SHOULD BE TAUGHT AND HOW MUCH TIME SHOULD BE DEVOTED TO THEM?

BY D. B. R. JOHNSON.*

First, they should be taught in qualitative chemistry, showing the student at that time that every reagent used there becomes an incompatibility in dispensing. If this is done by those teaching our chemistry to pharmacy students, then the chemical incompatibilities will be so well tied to the knowledge of chemistry that little more will be needed in a drug course on incompatibilities of this kind.

The pharmaceutical incompatibilities should be stressed by the teacher at the time the student is carrying the galenicals and other pharmaceutical preparations. In these the solvent used frequently determines the incompatibility of the various preparations.

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