

before he undertook the study of medicine, and the same thing applied to the pharmacist. He could see no objection to having knowledge as to whether a medical college in New York or California taught prescription-writing, but he could see no benefit to be derived from such an investigation, beyond the securing of a lot of statistics for publication, and, personally, he did not agree with this tendency. He believed the physician and pharmacist should be, from a scientific and professional standpoint, intimate friends in every respect. He had found it better policy not to allow a continuous enmity between the two professions. A great many physicians were willing to write prescriptions and trust to the pharmacists, who had the proper education, to correct their Latin. Very often the physician did not know the exact degree of solubility of certain articles, but he said "make a solution," and left it to the pharmacist, and it would be bad taste for the pharmacist to conclude from that, that the physician was a fool.

CALOMEL SUSPENSION.*

F. W. NITARDY.

The object of this paper is not, as you may assume from the title, to explain how to produce a calomel-suspension, even though this will be done incidentally, but it is written to relate an experience which may apply to other substances precipitated from solution, and may, in that capacity, prove of interest or value.

Some years ago, a "beauty doctor" came to me with the request to duplicate for her a certain liquid face powder. I had seen the analysis of this preparation published, and I had confirmed same by my own analysis. Its composition was calomel and water.

I found that the calomel on the market was too coarse to be used for this purpose, so I determined to make a finely divided calomel by precipitating same from a dilute solution. I had no difficulty in obtaining calomel of the desired fineness or even finer, but found that when this was mixed with water, the precipitate would invariably coalesce into a curd, and then rapidly settle out. I tried to overcome this tendency in various ways but failed.

The "beauty doctor" was not satisfied with this preparation and as she left the city soon afterwards, I paid no further attention to the mixture, a sample of which still remained in our laboratory.

Some weeks later, I thought I would add some mucilage of Acacia to the mixture and see how much of a mucilaginous substance would be necessary to prevent this curding of the precipitate. So, I added 5 percent, by volume, of mucilage acacia, and shook the mixture well. I found this was sufficient to bring about the desired result, possibly more than sufficient. To determine this, I allowed the mixture to stand until the calomel had settled out, decanted a portion of the supernatant liquid and replaced it with water. It still remained in the desired condition, so I repeated the operation and kept on repeating it, until all the mucilage had been washed out of the precipitate, which no longer coalesced in curds when suspended in water. In this condition it remained suspended in the water.

To illustrate this clearly to you, I have brought a sample of the suspension, half of which has been treated as above outlined.

*Section of Practical Pharmacy and Dispensing, A. Ph. A., Nashville, Aug., 1913.

As was stated in the beginning, this paper was written to illustrate the change in the behavior of a precipitate under this treatment, for I doubt if a preparation like this calomel-suspension would have any practical value for pharmaceutical purposes, unless it be as a liquid face powder.

DISCUSSION.

Mr. Dunning said that he thought probably the explanation of the effect that Mr. Nitardy had procured was, that the mixture is somewhat of a colloidal nature, and he thought possibly he would have gotten the same results if he had used some other colloid. Gelatin perhaps might do. It might be that the bichloride might interfere in case of gelatin. However, if some suitable colloid could be found and dissolved in water in which the precipitate is to be formed, it would probably require only a trace and good results might be obtained. The calomel would be thrown out in very fine state of sub-division, and would remain in that state, and then the precipitate could be washed with a very weak solution of colloid.

Mr. Raubenheimer stated that a very surprising affect could be had by adding a small amount of gum arabic or mucilage to both of these solutions, mixing them together, and it would produce a very clear solution, with no precipitate.

Mr. Dunning's reply to this suggestion was, that it was quite possible, instead of being able to get a precipitate, one might not be gotten by following his suggestion. While a precipitate may be formed, it might have the characteristics of a solution, and this trouble, he thought, would probably be overcome by using a minute quantity of colloid, but this could only be determined by experiment.

Mr. Nitardy said that he would like to state that the fineness of precipitate in both bottles was exactly the same. This could be proven by examining the precipitates under a high-powered microscope. There was a particular tendency, which might be called molecular cohesion, which caused them to come together. After they had cohered, they settled out more readily. He recognized that there might be other ways of accomplishing these same results.

Doctor Fantus said that, just as a suggestion, he was wondering whether it might not be possible for it to be a question of electrical change, resulting in a coalescence of the particles of calomel.

Mr. Wilbert thought this was another illustration of "How little we pharmacists know." They thought they knew a lot, until they came to look into a solution or a mixture, such as those which had been seen here, and then realized it was all based upon presumption, and not upon knowledge.

Mr. Dunning said that the reason that pharmacists knew so little about conditions of this kind was, that no one knew much about colloid-solutions and colloidal-conditions, and he was positive that whatever might be the actual conditions here, it was of a colloidal-nature, or had to do with the colloids.

Mr. Windolph said the author of the paper had said that he did not know that it would matter much, since the suspension of calomel was probably useless for any other purpose, than as a liquid face-powder. He thought if there could be produced a preparation of calomel, that would hold the chemical in suspension, a valuable addition would be had to *materia medica*. The most important objection to an ointment in some of these skin lesions, was the fact that grease prevents the elimination of certain matters which should be removed; and a wash which had no greasy substance in it, and which would distribute the calomel properly, he was quite sure would find a place in many cases of eczema and such diseases.

Mr. Nitardy thanked Mr. Windolph for the suggestion made. He said that, for fear some of the members might have noticed a difference between the two bottles exhibited, aside from those he had stated, he wished to mention one thing he had forgotten, viz: In one of the preparations he had used orange-flower water, whereas in the other he had used plain water. That was done to see if the calomel would discolor in rose-water or orange-water.