NON-ALCOHOLIC SOLVENT FOR ACETYLSALICYLIC ACID.*

BY IRWIN A. BECKER.

It is usually desirable to give medicines in solution to infants and young children. Hydroalcoholic vehicles, such as aromatic elixir, essence of pepsin, etc., may dissolve a sufficient amount of acetylsalicylic acid for the required dosage, but are, frequently, undesirable for other reasons—their alcoholic content or some other constituent of the preparation.

Recently, physicians in our community prescribed solution of potassium citrate, made with lemon juice, as a solvent and vehicle for acetylsalicylic acid. They were very particular relative to the method of preparation and, in some instances, designated the pharmacist by whom these prescriptions were to be compounded. Some pediatricians discovered that solution of potassium citrate readily dissolved acetylsalicylic acid in sufficient quantity for their needs in the treatment of children. It was also found that the proportion of potassium citrate to acetylsalicylic acid varied, within a limited range—between three and four parts of potassium citrate to one of acid, on the one hand, and an undesirable amount or the limit of solubility of the potassium citrate, on the other. The most desirable proportions, to insure complete solution under the various conditions of compounding, are about four to one, *i. e.*, for every gramme of acetylsalicylic acid, prescribed in a mixture, 4 grammes of potassium citrate are required. Syrup may be added, if desired by the physician, to make the preparation more palatable.

The writer experimented with sodium citrate and found that it answered the purpose as well as potassium citrate, and is considerably cheaper. A number of physicians who were interviewed relative to possible therapeutic incompatibilities between alkaline citrates and acetylsalicylic acid stated that in their practice none had occurred.

It may be mentioned that the delicate reaction with ferric chloride solution for free salicylic acid and soluble salicylates is inhibited. It was also attempted to remove the dissolved acetylsalicylic acid by shaking out with immiscible solvents, using both ether and chloroform alone, and together, but only a very small amount of residue was recovered on evaporation of the solvent, showing that, probably, a combination of the acetylsalicylic acid and the alkaline citrate is effected. It was also found that salicylic acid can readily be dissolved in water by the aid of sodium or potassium citrate in the proportion of four to one; so that with a solubility of 1 to 460 in water, 5 grains of salicylic acid and 20 grains of sodium or potassium citrate will readily dissolve in 60 minims of water, *i. e.*, in the proportion of about 1 to 11.

GALEN.*

BY LOUIS GERSHENFELD.

I will venture to ask your attention to a brief sketch of a historical personage, who may be considered as representing one of the most remarkable of medical and indirectly of pharmaceutical characters, one to whom we owe a debt of gratitude.

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* Read before Section on Historical Pharmacy, A. Ph. A., New York meeting, 1919.