

Notes on Practical Pharmacy.

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The following notes on practical pharmacy have been the result of the writer's experience, mainly in the direction of preparation of the official galenicals. The question as to how far a pharmacist is justified in going in an alteration or modification of an official formula is, I think, best answered in this way: To the extent in which there is no alteration of therapeutical action, diminution in strength, nor decided change in obvious physical properties. It goes without saying that the therapeutical activity of the drug should remain unchanged, or else the preparation will not represent the drug from which it is made, and that the strength should be maintained or else unreliability will result. Just to what extent the physical character of a preparation may be modified is dependent upon the circumstances of each special case; as to whether the Pharmacopoeial process is particularly faulty, or whether it will not yield the results claimed for it, or whether it can be improved without cost to its therapeutical value and strength of drug.

Compound Chalk Powder.—This new official powder, for the extemporaneous preparation of chalk mixture, can be improved in its making by adding oil of cinnamon directly to the powder, and making the mixture up with water, as needed. To each troy ounce add 4 minims of the oil of cinnamon. Criticism has been made upon the large amount of sugar in this powder—one-half. As the mixture is most largely used for diarrhoea or intestinal relaxation, accompanied with acidity, often the result of food fermentation, the use of any sugar would seem to be therapeutically objectionable, as it merely increases the fermentation. A much better plan would be to replace all the sugar with powdered acacia. Further, in view of the mild astringent influence of cinnamon water, it is better to make the mixture up with all cinnamon water instead of equal parts of it and water, as directed by the U. S. P., 1890. Save the use of a small quantity of syrup ($\frac{1}{16}$), the B. P. recommends the former.

The official mixture contains 100 grains of powder to the fluid ounce. It is too weak, and should be, at least, 2 drams to the fluid ounce.

Some physicians use chalk, powdered cinnamon, acacia and water. This does not make as elegant a preparation as the official, but the tannic acid in the powdered cinnamon adds greatly to its therapeutical value.

Weighing Iodine.—It is, of course, inadmissible to weigh iodine directly upon metallic pans, and paper decomposes so quickly on contact with it that the pans underneath are also attacked. In the absence of glass or horn pans, the best substitute is paraffin paper.

Sodium Bromide.—Through a prominent firm of manufacturing chemists, I have learned of an apparent inconsistency

in the percentage of sodium chloride permitted by the present Pharmacopoeia in this compound. Under bromine the official maximal limit of free chlorine is 3 per cent, while under sodium bromide the maximal limit of sodium chloride is also 3 per cent, which, of course, is inconsistent. The error probably arose in following too closely the G. P., which makes the maximal limit of chloride in NaBr 3 per cent. But no notice was taken of the fact that American bromine always contains more free chlorine than German bromine, and, since the manufacturers have no practicable method of separating the chlorine in its entirety, the maximal limit of chloride in sodium bromide should be made not less than 5 per cent.

Wine of Antimony.—Physicians complain that the official wine of antimony is entirely too weak in tartar emetic. The first editions of the Pharmacopoeia made it 1 grain to the fluid ounce. The present edition makes it 1.8 grains, a reduction of 55 per cent. The writer has furnished a satisfactory preparation by averaging the two extremes and making it 3 grains to the fluid ounce.

Ammonia Water Containers.—The best method for preservation of ammonia water in containers that the writer has found is a common cork, covered with a piece of cheese cloth, and this covered with a piece of paraffin paper. An ordinary glass stopper is totally insufficient to prevent some of the vapor from escaping, while the dark coloration produced by contact of the ammonia with cork tissue renders the use of corks alone objectionable.

Spirit of Camphor.—The official dilution in alcoholic strength of 20 per cent. with water is inadmissible, for the reason that when it is prescribed with volatile oils, turpentine, soap liniment, etc., as is often done in making stimulating liniments, there is precipitation of camphor, or, rather, a deficiency in the amount dissolved that would have remained in solution had the spirit of camphor been made with strong alcohol, as in the U. S. P. 1870 formula.

Spirits of Peppermint and Spearmint.—The official formulas for these two preparations can be improved by macerating the herbs with alcohol, filtering and dissolving the oils in the filtrate. It is needless to say that filtration without the presence of dissolved oils is much more rapid than with their presence. Turbidity in these spirits, arising from undissolved oils, or more probably from traces of resinified oil, can be removed by agitating the liquid with long narrow strips of a sheet of filtering paper and filtering. Sometimes the addition of a small quantity of precipitated phosphate of calcium is also necessary.

Compound Tincture of Lavender.—This preparation, which has been very largely replaced by the increasing popularity of compound tincture of cardamom, can have its official formula improved by exhausting the drugs with the menstruum first, and then dissolving the volatile oils

in the percolate. By this means the drugs are more readily exhausted and the preparation more quickly made.

Solution of Magnesium Citrate.—For causing effervescence a very elegant substitute for the acid potassium bicarbonate is Merck's sodium bicarbonate "in crusts." It gives a pleasant saline taste to the preparation, instead of the usual bitter, acrid one.

Compound Syrup of Hypophosphites.—Glycerin in the proportion of 2 fluid ounces to the pint greatly increases the therapeutical value of this preparation.

Ammonium Carbonate.—Therapeutists agree that the diffusible stimulant action of ammonium carbonate is best presented in the hard clearly-crystalline variety and that the effloresced product is for practical purposes therapeutically valueless by comparison. This is why many physicians in their prescriptions specify the "clear" or "crystalline" variety. They have found the effloresced powder valueless. Why ammonium carbonate effloresces on exposure to air is easy of explanation when we remember its chemical composition of acid carbonate and carbamate—a dehydrated normal carbonate—and that the latter readily absorbs water and carbonic acid gas (from the air) to become an acid carbonate. How best to prevent this change has always been a most difficult question. For this purpose I have been using for the last five or six months an expedient which has answered admirably. It consists simply in placing medium-sized lumps of the salt in a museum or fruit jar (glass top), preferably upon a porcelain or glass support, to keep them from touching the bottom of the container, and then adding a small quantity of stronger ammonia water and closing. The ammonia gas neutralizes the carbonic acid gas in the air of the container, and the salt remains hard and densely crystalline. I here present for inspection some ammonium carbonate over four months old preserved by this method.—*Am. Jour. Phar.*

SOLUTION OF SALICYLIC ACID.—Barnouvin (Rev. de Therap.) draws attention to the fact that glycerin is a good solvent of salicylic acid. By heating, glycerin is able to bring into solution $\frac{1}{50}$ of its weight of the acid, the acid not being deposited on cooling. In endeavoring to obtain a more concentrated solution he found that separation takes place on cooling. A glycerin solution of salicylic acid (1:100) will stand dilution with water without precipitation.

ARISTOL has been injected into scrofulous abscesses with good results. Five minims of a 1 per cent. solution, in sweet almond oil, was the dose.

TONOSUI is a fungus on the Larix leptolepis, used by the natives of the island of Yezo for various diseases. An acid isolated appears to be identical with agaricic acid.