

## Section on Practical Pharmacy and Dispensing

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### NOTES ON SOME PHARMACEUTICAL PREPARATIONS.

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For many years past we have kept a record of hints and suggestions for the improvement, or expediency in manipulation of, the various pharmaceutical processes or operations, which have come under our observation, and I take pleasure in presenting to you at this time some of the data which, in our experience, have proven to give excellent results.

It is not claimed that these devices are all original, but were simply obtained from authentic sources, tested, tried, and not found wanting. I will first call your attention to a few points—simple but very essential—in the making of U. S. P. syrups. We formerly had considerable trouble in making satisfactory syrups, both simple and medicated, until we began using the brand of sugar known as "Crystal A" Confectioner's Sugar. This particular brand seems to be entirely free from the bluish coloring principle. The water, too, must be distilled, not sterilized, if you expect to make a perfect product.

We also experienced some difficulty in maintaining a satisfactory syrup of Wild Cherry. Inasmuch as the influence of light exercises a very detrimental influence on the keeping quality and remedial value of this syrup, we have found it quite advantageous to keep the stock syrup in an amber-colored glass container. Some authorities claim that the aromatic principle is entirely dissipated in a few months upon exposure to direct light. Incidentally I might mention that such clinical authorities as Wood, Sollman, Wilcox and others are convinced that this preparation is used chiefly for a flavor and contains little, if any, therapeutic property.

The Compound Syrup Hypophosphites formerly gave us some difficulty in making a permanently clear product owing to the presence of a basic calcium salt. The addition of a small quantity of Hypophosphorous Acid seemed to remedy the trouble.

An Elixir Terpin Hydrate containing double the amount of the Terpin Hydrate can be prepared by the addition of a small quantity of Acetic Acid. The formula we now use is as follows:

Terpin Hydrate (in powder).....	256 Gr.
Acetic Acid .....	80 Min.
Tinct. Sweet Orange Peel.....	2 Fl. Dr.
Alcohol .....	8 Fl. Oz.
Glycerin .....	4 Fl. Oz.
Elixir Aromatic, sufficient to make.....	16 Fl. Oz.

Dissolve the Terpin Hydrate by the aid of a gentle heat in the alcohol, to which the Acetic Acid has previously been added. Then add the tincture sweet orange peel, glycerin, and lastly, elixir sufficient to make 16 fluid ounces.

Most formulas suggested by other experimenters seem to be heavily charged with glycerin in place of the alcohol, in many instances, making the preparation eligible to the class of Glycerites. Many also suggest the use of Saccharin as a sweetening agent, which has recently been tabooed by the Pure Food and Drug authorities.

We also make Elixir Aromatic by using only one-half the quantity of syrup and water called for, in the first part of the operation, mixing with the spirit of orange, and alcohol, and filtering until a clear solution is obtained. By this operation there is an economy of several hours' time.

When dispensing the U. S. P. Infusion Digitalis, the physician expects to get a preparation which represents the entire diuretic property of the drug. For this reason we have always employed the well known English brand of the drug. Although costing more than double the price of the American grown drug there is no comparison in the quality of the finished preparation.

This idea of economy is of altogether too frequent occurrence among our pharmacists. Many of the newer U. S. P. and N. F. formulas have incorporated in their text numerous volatile or aromatic substances—in some instances as adjuvant—in others because of some therapeutic value. It is possible that in many instances their object is entirely defeated through the dispensing of an inferior product. Take the case of the Liquor Antisepticus, Tinct. Lavend. Comp., etc., as examples, the medical properties of which depend entirely upon the volatile oils. Many of our more progressive wholesale drug firms now attach a label showing the physical constants of each oil, thereby ensuring uniformity and accuracy in the finished preparations in which they are employed.

We prepare many of the aromatic medicated waters, by simple agitation of the oil with hot water, allowing same to stand for several days or weeks as the case may be. The product is then poured upon a wet filter, which retains the excess of oil, and the preparation is then ready for use.

For more than ten years we have used the circulatory displacement method in preparing Tincture Iodine with most happy results. The U. S. P. 1890 formula calls for Potassium Iodide in addition, which is not immediately dissolved. We use about 90 per cent. of the alcohol at first, place the mixed chemicals in a muslin bag, suspend for one-half hour in the liquid. After that we take any excess of potassium salt out of the bag, add to the tincture thus prepared, and finally wash the bag with the remainder of the alcohol.

In making up emulsions of fixed oils, such as Castor, Almond, Cotton Seed, etc., the addition of powdered Castile Soap—about 1 gramme to each 30 cc. of oil—makes a most excellent emulsifying agent. In the case of Castor Oil emulsion, the soap likewise increases the aperient action of the oil. The soap may also be used in preparing emulsions of Balsam Copaiba by increasing the amount with very satisfactory results. Emulsions of this character, however, are not as permanent as those made with Gum Arabic.