

extractive matter in Cinchona and when glycerin is used in the menstruum percolation is difficult. Sanguinaria (hydro-alcoholic) causes much trouble. The writer tried menstruums of different strengths and also additions of a little hydrochloric, acetic, and nitric acids. If the drug is fine, it packs so that percolation is impossible. The best results were obtained by using 71% alcohol, with about 2% of hydrochloric acid, and having the drug coarsely powdered. Gelsemium is hard to extract, which may be due to the starch and gum which it contains. Nux Vomica also gives trouble. This drug contains about 11% proteid, 6% of sugar, and gum, which may account for the difficulty. Pilocarpus is also troublesome.

Without long-continued percolation, it is sometimes difficult to thoroughly exhaust Sundew, Echinacea, Fringe Tree, Gravel Plant, Adonis, Arbor Vitæ, and Caulophyllum.

As the primary object of Fluid Extracts is concentration, a suitable menstruum should in each case be selected with the object of dissolving and retaining permanently the active constituents of the drug, and in order to do this, each drug must be separately and individually studied. Many experiments are necessary, to determine which is the most suitable menstruum and the best conditions on a manufacturing basis.

NOTES ON A GLYCERINE SUBSTITUTE.

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Two years ago, when Glycerine doubled in price, there appeared on the market two very similar substances, under coined names, at about half the price of this article, and for which the following claims were made: "Mixes readily with water, keeps indefinitely, never becomes rancid or ferments, contains no acids, in many respects and for many purposes is far superior to glycerine; made from cane sugar; especially adapted for use where soft, moist results are desired and for which purpose it is being employed successfully in place of C. P. Glycerine, also as a sweetener for food products, and, finally, for all purposes for which C. P. Glycerine is used." The above statements are misleading in almost every respect, especially in reference to its use in U. S. P. preparations, where on trial I did not find a single successful case, except in one instance, viz.: it could be used to keep solid extracts from becoming hard.

A physical examination showed a slightly yellowish color, no odor, an adhesiveness or viscosity resembling commercial glucose, taste much sweeter than glycerine, not cloying or repulsive, sp. gr. 1.402 at 25° C., soluble in water and alcohol, but not in a mixture of three parts of alcohol and one part ether.

Chemically the substance responds to every test for "Glucose" sugars, abundantly and quickly. It seems therefore, that the substance is a reduced cane sugar as claimed, of complex nature and considerable purity, but it is certainly not a synthetic, or near-synthetic Glycerine, and at best might be a substitute for commercial glucose, however, the price, four times that of the last named substance, would prohibit such use.