

down with the tincture and spirit before adding the water complete solution is effected.

The habit of using concentrated tinctures, infusions, &c., is one that should be discontinued and avoided by dispensers, except in cases of emergency, such as an urgent call up in the night. Infusions, and decoctions especially, should always be freshly prepared, as in many instances the therapeutic action of the drug may be undoubtedly impaired by being kept and preserved in concentrated form. The color and flavor also are in some cases quite different when the concentrated preparation has been used. In making his infusion fresh, the dispenser has also the satisfaction of knowing he has followed out the exact instructions of the prescriber.

To be continued.

Reference Table for Microscopical Work.

Cements and Varnishes.

Compiled by PROF. A. H. AUBERT.

Asphalt Varnish.—Asphalt, 150 grms.; linseed oil, 225 grms.; turpentine, 1,000 c.c.; or dissolve asphalt in benzol and to the solution add gold size. In the first method dissolve by the aid of heat; dilute when necessary with turpentine. Not very reliable as a cement.

Bell's Cement.—Probably a solution of shellac, but the exact composition is not known. This in the opinion of many is excellent cement.

Gold Size.—Linseed oil, 25 ozs.; red lead, 1 oz.; powdered white lead and yellow ochre, of each a sufficient quantity. Boil the oil and red lead together carefully for three hours; pour off the clear liquid, and boil with a mixture of equal parts of the white lead and yellow ochre added in small successive portions. Let it stand and pour off the clear liquid for use.

Gram-Rutson's Cement.—Hard Canada balsam, 50 grms.; shellac, 50 grms.; absolute alcohol, 50 grammes; anhydrous ether, 100 grammes. The ingredients are mixed, and when the gums are dissolved, filter if necessary, and evaporate, away from the flame, over a water bath until of syrupy thickness.

Gutta-Percha Cement.—Harting.—Gutta-percha cut in pieces, 1 part; turpentine, 15 parts; shellac, 1 part. Heat the gutta-percha and turpentine together, filter, add the shellac pulverized, and heat until a drop hardens on a cold glass plate. Used to attach cells; the slide must be warm when using the cement.

Brown Cement.—Pure gum rubber, 20 grains; carbon disulphide, a sufficient quantity; shellac, 2 ozs.; alcohol, 8 ozs. Dissolve the rubber in the smallest possible amount of the carbon disulphide; add this slowly to alcohol, avoiding clots; add powdered shellac and place the bottle in boiling water until the shellac is dissolved

and no more smell of carbon disulphide is given off.

Guaiaecum Varnish.—Gum guaiacum, 2 ozs.; shellac, 2 ozs.; alcohol, 10 ozs. The powdered gum guaiacum is dissolved in the alcohol and the powdered shellac added; keep the bottle in hot water until all is dissolved.

Shellac Varnish.—1, shellac, 60 grms.; 2, alcohol, 60 grms.; 3, castor oil, 25 grms.; 4, alcoholic solution of anilin dye, a few drops. 1 and 2 are dissolved and heated until quite thick, then a little of 4 is added, and for every 60 grammes of the mixture add 25 grms. of castor oil, and heat for a time.

Electrical Cement.—5 parts of resin; 2 parts of hard balsam, 1 part of yellow beeswax; 1 part of red ochre. The components are melted together. This is not usually employed for mounting purposes but may be used in cementing glass and metal parts of instruments.

Zinc White Cement, German Formula.—1, mastic; 2, dammar; 3, sandarac; 4, venetian turpentine; 5, turpentine; 6, benzol; 7, zinc white. 1, 2 and 3 powdered are mixed in a well-corked bottle with 4, 5 and 6; shake well occasionally; after several days' filter, and triturate in a mortar with zinc white in quantity sufficient. Dilute if necessary with benzol.

Zinc White, English Formula.—1, gum dammar; 2, gum mastic; 3, benzol. Dissolve powdered 1, 2 and 3 in a well-corked bottle; when dissolved filter, and mix carefully in a mortar with zinc white.

Marine Glue.—India rubber shreds, 2 ozs.; shellac, 2 ozs. Dissolve the rubber in mineral naphtha, add the powdered shellac, heat until liquefied, and mix well together. This gives solid marine glue, and requires heat in its application. Great care should be observed in having all fire and flame removed while there still remains naphtha in the mixture.

Lovell's Cement.—Powdered white lead, 2 parts, powdered red lead, 2 parts, powdered litharge, 3 parts; gold size. The white lead and red lead and the litharge must be very finely powdered; for use, this powder is mixed with gold size to the consistency of cream, and the cells immediately fastened to the slide. They are secure in two weeks. This stands considerable heat, and is excellent for fluids containing some alcohol. Make a little only of the mixture with gold size at a time, as it hardens quite rapidly and becomes useless.

King's Cement—and Lacquers.—Satisfactory and highly recommended by some.

Brown's Rubber Cement.—Very good for finishing slides.

Miller's Caoutchouc Cement.—Sold in England by opticians. It is a most excellent and quickly drying cement.

Hollis's Glue.—Somewhat similar to Bell's cement.

Nearly if not all of the foregoing can be most advantageously bought of the opticians and dealers in microscopical materials.—*The Microscope.*

Purification of Chloroform by Cold.

The artificial production of cold is about to be practically applied by M. Pietet, under a patent, in the purification by congelation of various liquids, and, amongst others, chloroform. It is stated that when the temperature of the purest brands of commercial chloroform is lowered to 70° C., partial crystallization takes place. If the crystals be removed and the refrigeration increased, at a temperature below 100° C., the chloroform itself crystallizes out, and can be removed from a residuary impure fraction. The chloroform so purified is described as being at a temperature of 15° C. a clear liquid of specific gravity 1.51, which can be preserved unaltered for an indefinite time, in daylight, in white bottles, and without any addition of alcohol. Upon shaking it with concentrated sulphuric acid no coloration of the latter occurs even after a long time. When shaken with chromic acid mixture no reduction takes place, the mixture remaining yellow.—*Pharmaceutical Journal and Transactions.*

WINDOW-PANE BAROMETER.—A pretty use for cobalt and nickel salts, which, as is well known, are affected by changes in the amount of moisture in the air, and which change they indicate by exhibiting different colors, is suggested by Rueckert in the *Rep. Annul. Chim.* if window-panes, or wall paper, or the like, are painted with the following solutions: 1. Chloride cobalt, 1; gelatin, 10; and water, 100. 2. Chloride copper, 1; gelatin, 10; and water 100. 3. Chloride cobalt, 1; gelatin, 20; water, 200; nickel oxide, 0.75; chloride copper, 0.25; they will be colorless in damp weather. In clear weather, solution number one will give blue color, number two yellow and number three green. *New York Medical Times.*

EUROPHEN is one of the iodine compounds proposed as a substitute for iodoform, from which it differs in being comparatively free from odor, is not toxic; that it is so much lighter than iodoform that the same weight will cover far more surface; its action on pus by liberating its iodine in contact with it is satisfactory. Europhen is not soluble in water or glycerin, but is soluble in alcohol, ether, chloroform, collodion, traumaticin and fixed oils. It is said to be formed from one of the phenol series (Isobutylcresol) and hypiodous acid (HIO).

PILLS MADE FROM OLEORESINS, creosote, balsams, etc., with calcined magnesia for an excipient, are failures therapeutically, as they, very soon after making, become as hard as bits of granite, and pass through the stomach and bowels unchanged. They are so hard that if kept for several hours in hot water, 176° F., they do not disintegrate.—*Indiana Pharmacist.*

Some Commercial Anethols are claimed to frequently be nothing more than fractionated anise oil.