paper, backed card board. The object of this block is that an ointment can be made upon the top sheet of the layer, the sheet removed and thrown away, and the slab will be ready for another ointment; thus doing away with the usual ointment slab and its frequent cleaning. Practically however, there will be found several objections to its use. First, with a stiff ointment it will be hard to thoroughly admix ingredients; second, ointments may be smeared over its sides and spoil the lower sheets, and third, the parchment paper may decompose chemical products mixed on it. Upon this sample "block," I have made some iodine ointment, and you will notice that the iodine has decomposed the paper, Still, the "block" is an ingenious idea and may find a certain application in the making of ointments.

GELATIN CAPSULES.—Within the past few years the usage of gelatin capsules has greatly increased, and the reason is not far to find, in that through them many efficient but unpleasant substances can be exhibited without offending the most delicate of palates. Among the more common products used at the present time, there may be mentioned: Terebene, oil of turpentine. oil of gaultheria, creasote, either alone or with cod-liver oil, copabia, oil of sandalwood, apiol, and others. The capsules are filled with a minim graduate and then capped in the way described by Mr. C. Carroll Meyer, before the College Meeting in December, 1891. The capsules referred to are the familiar medium-hard, empty containers, with removable caps.

Melting Points.

H. A. D. JOWETT.

The melting of a body is one of the most useful criteria of its purity, and for this reason the physical constant is of great value both to pharmacists and chemists—to pharmacists in determining the purity of waxes, fats, fatty acids, &c., and to chemists for various organic substances as alkaloids and their salts.

There are three methods in use for determining melting points: (1) using a capiliary tube; (2) placing the substance in a narrow test tube, and inserting. the thermometer into the tube and substance; (3) placing the substance on the surface of the mercury, the temperature of which is registered by a thermometer placed in the mercury.

The capiliary tube is the official method for taking melting point of cera flav. The wax is first melted, and drawn into the capiliary tube, the capiliary tube attached to the thermometer and the whole placed in water, and water slowly heated and the temperature of fusion noted. I consider this a bad method in principle, because it involves melting the substance first, which is very objectionable. For powders and substances which are valuable this method is the one *par excellence*. Many fluids have been suggested for the bath, water, of course, only being of use up to 100°, and thus being inapplicable in most cases. All have advantages and disadvantages.

Strong sulphuric acid is my favorite bath, and, provided care be taken, is very satisfactory up to about 300° C. The only danger is that of breakage, and a test tube full of strong sulphuric acid at 200° is not an appreciated application to the experimenter; otherwise it answers the purpose excellently. It heats up regularly and at a very good speed; blackens only slowly, and then may be bleached effectually by adding a crystal of potassium or ammonium nitrate, and does not require renewal until a considerable time has elapsed. Paraffin is preferred by some, but it blackens very quickly, is solid at ordinary temperature, and does not heat up so nicely as acid. There is not very much to choose between receiving hot paraffin or sulphuric acid in your lap. Glycerine is not at all suitable, it gets black so very quickly, and the same objection applies to phosphoric acid.

With ordinary care, sulphuric acid is safe, and is, I think, most suitable, answering equally well for low as for high temperatures.

This is the method used generally for organic substances.

The second method is one which is claimed to give more accurate results.

A suitable test tube is taken, and the substance, in a state of division, introduced. Sufficient of the substance is taken, so that when fusion has taken place the bulb and portion of the stem of the thermometer will be immersed in the liquid. The test tube is immersed in a bath, and the thermometer inserted in the test tube, and the bulb surrounded by the substance.

The bath is then slowly heated up, and the substance stirred by either platinum stirrer or the thermometer, and the temperature of fusion noticed. A correction must then be made in the usual manner for cool column. This method is inapplicable in cases where quantity of material at disposal is small as in organic work, but it appears to me that it would be a better method for taking the melting point of fats and waxes than the capillary tube method.

The beeswax would be introduced in very fine shavings, and the bulb of the thermometer inserted and surrounded by these shavings: on slowly heating up and stirring with thermometer bulb the exact temperature of fusion would be easily read. Certain physicists claim that this is the only method that gives the melting point accurate.

The apparatus required is within the reach of every pharmacist.

The third method is one not very much used. A beaker of mercury is taken and the thermometer inserted in the mercury, and the substance in small quantity placed on surface of mercury; on slowly heating the mercury the substance melts—disappears—and the temperature of fusion is read off. The disadvantage of this is that the mercury does not heat up nicely—too quickly and not uniformly—and thus very often one does not get a correct reading. Correction must be made for the cool column.

In future every pharmacist will have occasion to take melting points of certain of his drugs to be satisfied as to their purity. Alkaloids in particular—where the purity varies so in every sample—serious results may happen if the pharmacist is not careful to always take the melting point of every new sample that he purchases. The operation requires only ordinary care, and the apparatus is exceedingly simple.

I should suggest that for waxes, fats, &c, the second method be used, and for substances like alkaloids, salicylic acid, &c., the capillary tube method be employed.—*Br. and Col. Druggist.*

Crystallized Knowledge-Classification of Preparations.

Solids.—Abstracts, confections, cerates, extracts, masses, ointments, papers, plasters, pills, powders, resins, suppositories, triturations, troches.

Liquids.—Collodions, decoctions, elixirs, fluid extracts, glycerites, honeys, infusions, liniments, mixtures, mucilages, oleo-resins, oleates, solutions, spirits, syrups, tinctures, vinegars, wines, waters.

Semi-Solids.—Confections, cerates, extracts, liniments, oleates, ointments, plasters, suppositories.

Comparison of Weights and Measures.—Metric and apothecaries: Gram equals 15.5 grains; 0.1 equals 1.5 grains; 0.01 equals .15 (or 1-6) grain; 0.001 equals .015 (or 1-64) grain; 1 grain equals .06 gram; 1 dram equals 4.0 grams; 1 ounce equals 32.0 grams; 1 cubic centimetre equals 15 minims or ¼ fluid dram (approximately).

Young's Rules for Dosage.—Add twelve to the age, and divide by the age, to get the denominator of the fraction, the numerator of which is one. Thus for a child two years old, two plus twelve divided by two equals one-seventh.

AID IN MEMORIZING DOSES.

1. The dose of all infusions is 1 to 2 ozs., except digitalis, which is 2 to 4 drams.

2. Of all poisonous tinctures, five to twenty minims, except tincture of aconite, digitalis and nux vomica, which is one to 5.

3. Of all wines, from one-half to 1 dram, except wine of opium, colchicum rad., which is 5 to 15 minims.

4. Of all poisonous solid extracts you can give one half grain, except extract of calabar bean and cannabis indica, which is one-sixteenth to one-quarter grain, extract belladonna, one-quarter grain.

5. Of all diluted acids, from 5 to 20 minims, except dilute hydrocyanic acid, which is 2 to 8 minims.

6. Of all waters, 1 to 2 ounces, except cept aqua lauro cerasus and aqua ammonia, which is 10 to 30 minims.

7. Of all syrups, 1 dram.

8. Of all mixtures, one-half to 1 fluid ounce.

9. Of all spirits, one-half to 1 ounce.

10. Of all essential oils, 1 to 5 minims.—*Indiana Pharmacist.*