Quantitative Determination of Alcohol.

M. Cotte, in a thesis presented to the School of Pharmacy at Montpellier, gives the following method, which is a modification of that of Reischauer.

From the aqueous solution of which it is desired to determine the alcoholic contents, remove a sample of any convenient size, which, however, should not contain more than 30 centigrams of alcohol. Introduce it into a small matrass, and add to it 50 cubic centimetres of the following:

Potassium dichromate, c. p. ..103 gm. 816 m.g.
Sulphuric acid, c. p..... .....150 ccm.
Distilled water, q. s. to make . .....1000 ccm.

Of this solution 10 cubic centimetres represents 25 centigrams of absolute alcohol.

Close the matrass tightly with a cork, put it in the water-bath and heat it for one hour. Remove from the liquor thus obtained 5 cubic centimetres, to which add sufficient distilled water to make (after the addition of ferrous sulphate) 150 cubic centimetres. To this, add drop by drop, sufficient of the following solution to reduce the excess of dichromate:

Ammoniacal sulphate of iron .....50 gm.
Sulphuric acid, c. p..... .. ..20 ccm.
Distilled water, q. s. to make.....1000 ccm.

The reduction is determined by removing from time to time a drop of the liquid, letting it fall on a saucer and touching it with a rod dipped into a recently prepared solution of potassium ferricyanide of 4% or 5% strength. The moment that an excess of the ammoniacal ferrous salt has been added to the liquid, the reaction will produce a blue color (Turnbull's blue).

It is necessary to titrate the solution of ferrous sulphate, each time, with the solution of the dichromate, and to keep accurate account of the number of drops of the ferrous sulphate solution necessary to produce the blue reaction in the 150 cubic centimetres of the aqueous solution. A very simple computation, on the basis of 25 centigrams of alcohol to the 10 cubic centimetres of the dichromate, will give the amount of alcohol in the sample, and hence of the percentage of alcohol in the liquid.

This process, which gives very accurate results in testing hydro-alcoholic liquids, seems destined to be of great service, especially in cases where the amount of alcohol present is very minute.—*National Druggist.*

Selections.

Incompatibilities.

A contributor to the *Annales de Pharmacie* calls attention to the fact that when sodium salicylate is brought into contact with an acid, or an acidulated syrup (strawberry, lemon, gooseberry, etc.), it is decomposed, salicylic acid being thrown down. It is well to remember, too, that when salicylate of sodium and antipyrin are brought together, salipyrin is formed. When ammoniacal ichthyol and vaseline are brought together they form a smooth, homogeneous pomade. If, now, an aqueous solution of sulphate or hydrochlorate of morphine be added, the pomade becomes lumpy, and it is impossible to make it again homogeneous. Morphine and its salts are incompatible with ichthyol.—*Nat. Drugg.*

Elixir and Syrup of Quinine, Iron, and Strychnine Phosphates.

In making the elixir, Prof. Caspari recommends the addition of ammonium acetate to give an elixir which will remain clear on diluting with water, or on chilling. This has also been tried on the syrup of three phosphates with success. The only change from the official formula is the substitution of a strong solution of ammonium acetate, made by dissolving 71 grains of clear ammonium carbonate in 225 grains of 36 per cent. acetic acid, for an equivalent volume of syrup in each pint of elixir. The syrup so made mixes well with water, but is more sensitive to light than the official preparation, and should be preserved in the dark.—*Merck's Report.*

Estimation of Menthol.

A quick approximate estimation of menthol in peppermint oil can be made in the following way: About 5 gr. of peppermint oil (accurately weighed) are mixed, in a flask connected with a glass ground condenser tube, with about 5 cc. acetic anhydride, accurately measured and boiled for 30 minutes. In the meantime an equal quantity of the same acetic anhydride is titrated with normal caustic soda and phenolphtalein. After cooling the boiled liquid somewhat, the condenser is taken off and washed with some water, which is added to the acetylized mixture, and then the latter is titrated with normal caustic soda. The difference in the number of ccs. in both titrations multiplied by 0.156 gives the menthol in the oil used. An inconvenience of this method is that comparatively large quantities of normal solutions are required, and that the desired number has to be calculated from the difference of both, which naturally makes the method less exact, but all of the operations can easily be performed in 50 minutes.—*Dr. Kleber.*

Fish Meat Extract.

One of the novelties in preserved food stuffs, recently patented in Germany, is a fish extract, put up in a style similar to beef extract. From the patent specifications we learn that it is prepared as follows: The fish, after the removal of the intestines, but not the scales, are cut up into little pieces, and, under pressure, boiled with water until the tissues are disintegrated. The liquid is then pressed off, freed from fat by skimming, put into the steam bath, and evaporated down to the consistency of an extract. The temperature of the bath must not be in excess of 150° C., as otherwise the taste of the product will be injured, and other changes are prone to occur. The extract is said to be of great service as a change from beef and other flesh extracts in the diet of valetudinarians. It is also vaunted as a diet for brain workers, and others requiring a food rich in phosphorus.—*Nat. Druggist.*

Mesquite Seeds.

The mesquite or screw "bean," which bids fair to become an important article of diet in the near future, is the product of a bush, growing wild in immense numbers, in the southwestern portion of the United States. It possesses strong nutritive properties, and is closely allied, in this respect and in its physical characteristics, to our common pea and bean. It has long been in use by the Indians and settlers of that part of the country, as a most satisfactory food. Reports state that this year's crop is so very abundant that millions of bushels of "beans" may be had for the gathering. A company has been organized in Texas with the object of introducing the burnt beans as a substitute for those of coffee, which they are said to closely resemble both in flavor and aroma. The Prosopsis juliflora (botanical name of the mesquite plant) grows luxuriantly in New Mexico and central Texas. It belongs to the Leguminosæ, an order producing many edible and nutritious vegetables.—*Phar. Review.*