

First remove the phosphates from the urine by adding an excess of sodium carbonate and filtering; now carefully titrate with the test solution, one cubic centimeter of which will cause a white precipitate exactly equal to 1 milligramme of uric acid.

*Hopkins' Test.*—To 100 Cc. of the urine add 30 grammes of pure, finely powdered ammonium chloride; allow to stand two hours, collect the precipitate (ammonium urate) upon a filter, wash it with a saturated, aqueous solution of ammonium chloride, and dissolve it in a minimum quantity of distilled water. Repeat the operation of precipitating with saturated solution of ammonium chloride, and redissolving in water several times to purify it. Finally, dissolve in hot distilled water, and decompose the ammonium urate by boiling in excess of HCl. The solution (concentrated, if necessary) is set aside, and the uric acid allowed to separate out. The amount may be determined by any accustomed method—as evaporation over a water bath or weighing on a tarred filter, etc.

#### URATES.

Uric acid is bi-basic, forming two series of salts, neutral and acid, the former being much more soluble than the latter. The urates are soluble at the temperature of the body; but on reducing the temperature the acid salts are precipitated. If acid be added to the urine, the neutral salts are converted into the acid salts which are then precipitated.—TYSON.

#### PHOSPHATES.

There are two kinds of phosphates present in the urine—earthy and alkaline. The earthy may be precipitated by the addition of any alkali; and to precipitate all the alkaline phosphates, add about one-third as much magnesium mixture.\* If the entire fluid, then, has a milky appearance the phosphates are normal, and if denser they are increased, and if only slightly cloudy they are decreased.—TYSON.

#### CHLORIDES.

The addition of one drop of a 1:8 solution of silver nitrate to the urine, causes a precipitate of chlorides in white cheesy lumps, if the chlorides are normal; if present to the extent of less than 1:10 per cent, no such lumps will be formed, but the whole will become slightly cloudy; and if no cloudiness appears, then the chlorides are absent.—TYSON.

*Tyson's Test* calls for the use of the following solution:

\* Magnesium mixture is made by dissolving three parts each of magnesium sulphate and ammonium chloride in twenty of water, adding five parts of ammonia water, letting stand for two days, and filtering.

Barium chloride..... 2 parts  
Distilled water..... 15 "  
Hydrochloric acid..... 1 part

The sulphates are thrown down by an addition of any of the barium salts. The best working formula is the above, and is applied in the following manner: Add about one third as much reagent as urine used. If the mixture assume an opaque, milky appearance the sulphates are normal; if it becomes thicker and more dense, the sulphates are increased; and if there is only a slight cloudiness, then the sulphates are diminished in quantity.

### Pharmaceutical Association of the Province of Quebec.

#### PRELIMINARY EXAMINATIONS.

The next preliminary examinations for candidates entering the study of pharmacy will be held in the Montreal College of Pharmacy, 595 Lagauchetiere Street, Montreal, and Laval University, Quebec, on Thursday, October 14th, 1894.

Candidates must give notice to the registrar, in writing, of their intention to present themselves at *least ten days* before the date fixed for the examination.

A printed form of application must be obtained from the registrar, which must be duly signed by the applicant.

The council of the association having instructed the registrar to strictly enforce the ten days' notice rule, no application will be accepted after the 24th day of September, 1894.

These preliminary examinations are held on the first Thursday in the months of January, April, July and October in each year.

E. MUIR, *Sec.-Registrar.*

595 Lagauchetiere St., Montreal.

### Pharmaceutical Association of the Province of Quebec.

#### NOTICE TO STUDENTS.

The Semi-Annual examinations for Major and Minor Candidates will commence on Tuesday, October 23rd, 1894, at 9:00 a.m., and will be held in Laval University, Quebec. Candidates must file their applications, duly certified, with the registrar, on or before the 13th of October.

Printed regulations and form of application must be obtained from the registrar, and be duly signed by the applicant.

Candidates who have failed more than once in their examinations will be required to pay the full examination fee.

E. MUIR, *Registrar.*