

many others are. But this is not the fault of the laboratory, but rather of the committee, who practically instigated the research. For instance, it has been suggested that an investigation upon *ipecaeanha* would have been of far more practical value than that upon *aconite*. Certainly there is no comparison between the two as regards their consummation in medicine. We have advanced a step also concerning the decomposition of chloroform and the means of preventing it. The use of thyroid glands in myxædema, goitre, etc., has been further demonstrated, although we are still unable to identify the nature of the remedy. During the last few months sulphite of magnesium has been added to the long list of so-called "specifics" for diphtheria. It is receiving an extended trial, but reports are by no means universally confirmatory. The production of citric and tartaric acids absolutely free from lead is a triumph in technical chemical manufacture achieved during the year. The physiological action of a large number of organic compounds have been investigated without important results, although we are daily learning more concerning the influence of certain groups in the compound. The rush for new remedies has somewhat subsided, and although the production of endless organic derivatives still continues in Germany, it provokes but little interest here.

Pharmaceutical legislation in this country is at a stand-still, and there are many who consider that that is the best for everybody. The law has been so clearly demonstrated on the question of poisons being sold by unqualified persons, although in the employment of a registered chemist, that it amounts to a new pharmacy act. The question of branch shops is agitating many minds and also what is known as the widow's clause—which permits a business to be carried on by the widow of a registered person provided she employs a registered manager. It is quite evident that it is impossible to tackle "company pharmacy" unless some alteration is made regarding these two anomalies. To "company pharmacy" originally we owe the cut-rate problem although now there are many private members of the craft who have joined the scalpers. The recent suggestion of a junior association that the promulgation of a code of ethics for pharmacists would clear the ground is interesting but impractical. The year closes without any serious and concerted attempt to grapple with the cutters; the efforts of a few isolated manufacturers to confine their goods to legitimate traders being only noticeable in comparison with the large number who are regardless of the matter and its consequence. The evil of substitution is, however, beginning to be felt by manufacturers and there is hope that this may lead to a better recognition of the only method of dishing the "muslin druggist," viz, by the hearty and loyal co-operation of manufacturers, wholesalers

and retailers. Is this too much to hope for in 1894?

University Examiners.

The following are the examiners chosen by the Senate of Toronto University for the examinations in pharmacy for 1894: Pharmacy, Chas. F. Heebner; Chemistry, J. Munro; Materia Medica, J. T. Fotheringham; Botany, T. McCrae.

New Reaction of Eserine.

In 1890 Ferreira da Silva announced that eserine is the only alkaloid of the benzenoammonical group which, when treated with fuming nitric acid (sp. g. 1.40) and evaporated to dryness, yields a green residue upon the borders of the capsule. In a closer study of this reaction da Silva found that it was marvelously accurate, and that the green residue itself enjoyed some highly interesting properties. In making the test take a fragment of eserine or one of its salts not larger than a little grain of sand (or say $\frac{1}{100}$ inch in diameter), place it in a little capsule and dissolve it with a drop or two of fuming nitric acid. The solution will at first be a clear yellow color, but in warming it over the water-bath, it passes successively into a deep yellow, orange yellow, and finally into orange. As evaporation progresses, under constant stirring, the residue becomes greenish until when finally dryness is reached the color of the dry material becomes clear green. In this manner the presence of as small a quantity of eserine or its salts as 5 mgm. can easily be determined. This green matter is soluble in water and alcohol, the solutions being green and non-fluorescent, and on evaporation of the solvent, is found unchanged. If we now let fall a drop of nitric acid upon the green matter, on returning the capsule to the water-bath, we will see the parts not directly touched by the acid become blue, but the whole finally becomes red-violet which gradually passes into a greenish. If we dilute the acid with water we get a fluorescent solution which by reflected light is blood-red, but by direct or transmitted light is greenish-yellow. Examined with the spectroscope the aqueous solution is characterized by three absorption bands. The first, which is sharpest, is in the red between λ (lambda) 670 and λ (lambda) 688; second is wider and occupies a place in the indigo between λ (lambda) 400 and λ (lambda) 418; and the third which is quite feeble is in the orange. The alcoholic solution shows the identical bands more clearly characterized. Petit has already described a blue coloring matter derived from eserine (physostigmine blue), which is obtained by treating eserine with ammonia. Daquesnel has obtained from the same alkaloid a red coloring matter (*rubreserine*) by treating it with the fixed alkalies. Ferreira da Silva proposes the name of *chlor eserine* for the green matter discovered by him.—*Nat. Druggist*.

Constituents of Mate.

Dr. Hermann Kunz-Krause, of the University of Lausanne, has investigated the chemical constituents of the *Ilex Paraguensis*, or mate, and finds besides the constituents heretofore said to be present—caffeine, tannin, proteid substance, etc.—that the leaves contain combined cholin, a reducing but optically inactive sugar as a decomposition product of the tannic acid, notable quantities of water-soluble potassium and magnesium salt. He also noted (2) that mate is free from ilixanthan, which is found in the allied *Ilex aquifolium*. (3) The tannic acid present is identical with that of coffee, both yielding dioxycinnamic acid as a decomposition product. (4) The dioxycinnamic acid so obtained forms neutral monobasic and dibasic salts with bivalent metals, and yields, on partial oxidation with nitric acid containing nitrous acid, as further derivatives pyrocatechin, and oxalic and hydrocyanic acids. (5) The derived dioxycinnamic acid is analogous to the other aromatic oxyacids, since at 200° C. its carboxyl group splits off as CO_2 , meta-para-dioxystyrol resulting.—*Arch. der Pharm.*

Iodide of Iron.

Roussillon proposes the following method for preparing an official solution of iodide of iron which will not alter, and which can be easily used for preparing syrup of iodide of iron when wanted quickly.

Take of

Iodine (re-sublimed).....	16.4 grammes.
Iron filings.....	8 "
Distilled water.....	30 "

These are allowed to stand until the reaction is over and then filtered into a flask containing 220 grammes of glycerine. The mixture is then exposed to a moderate heat until the liquid is reduced to 240 grammes. It is then rapidly transferred to bottles in quantities of 72 grammes, and the corks well paraffined. Each bottle serves to make one litre of syrup of iodide of iron. This solution keeps quite well in the light. The objection to this is that the addition of 70 grammes of glycerine per litre of syrup so alters the composition of it, that it becomes quite a different preparation.—*Reperoire*.

In the calcium spectrum some new lines have been discovered.

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BY GRADUATE O. C. P., in city or large town, as Assistant or Manager, good dispenser and salesman. Would take half interest or buy in a year. Address—"Morrhoul," Box 101, Rockwood, Ont.

SITUATION WANTED.

BY GRADUATE O. C. P., good dispenser, stockkeeper and salesman, steady and strictly temperate. Address—"Shaw," Box 91, Rockwood, Ont.