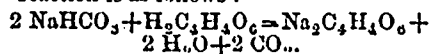


acid, as sodium is a univalent element, one atom of it being capable of replacing only one atom of hydrogen. In neutralizing the acid with sodium bicarbonate, the reaction is as follows:—

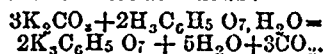


The two atoms of hydrogen are replaced by the two atoms of sodium, neutral sodium tartrate being formed. 168 parts of bicarbonate neutralize 150 parts of acid, the quantity necessary to neutralize 20 parts of acid is, therefore, found by the proportion—150 : 20 :: 168 : 22.4.

III.—When bismuth is submitted to the action of nitric acid, it is dissolved with violent effervescence, and the evolution of brownish acid vapors, a salt being produced which has the composition— $\text{Bi}_3\text{NO}_3$ . The brownish vapors consist of nitric peroxide, and are the result of a decomposition of a portion of the acid by the metal, in undergoing the process of oxidation, one molecule of acid being decomposed to furnish the oxygen required for that purpose. The reaction is represented by the equation— $\text{Bi} + 4\text{HNO}_3 = \text{Bi}_3\text{NO}_3 + 2 \text{H}_2\text{O} + \text{NO}$ .

Four molecules of acid react with one atom of metal, producing one molecule of normal bismuth nitrate, one of nitric oxide, and two of water; the nitric oxide becoming nitric peroxide in contact with the oxygen of the air. 252 parts of  $\text{HNO}_3$  dissolve 210 parts of Bi.; therefore the amount necessary to dissolve 2 parts is found by the proportion—210 : 2 :: 252 : 2.4. 2.4 oz. of  $\text{HNO}_3$  are equivalent to 3.4 oz. nitric acid, B. P., containing 70 per cent.  $\text{HNO}_3$ .

IV.—Potassium citrate is a neutral salt, and, by the officinal process, is prepared by dissolving citric acid in water, neutralizing the solution thus obtained with potassium carbonate, evaporating, and granulating. As citric acid is a tribasic acid, containing three atoms of hydrogen replaceable by metals, three atoms of potassium are required to form a neutral salt with one molecule of acid, potassium being a univalent element. The reaction which takes place is therefore as follows:—



Three molecules of carbonate and 2 of acid react to form two of neutral citrate, five of water, and three of carbon dioxide. The quantities ordered by the Pharmacopœia are 8 ozs. of carbonate and 6 ozs. of acid; but as this quantity of carbonate is considerably in excess of that actually required, the amount of product must be calculated from the acid. According to the above equation, 420 parts of acid produce 612 parts of citrate. Six parts of acid will therefore produce 8.7 ounces.

V.—Iodide of sulphur is a combination of

iodine and sulphur, produced by the direct union of the two elements, and consists of one atom of iodine 127, and one of sulphur 32; its formula is therefore  $\text{SI}$ , and atomic weight 159. 127 parts of iodine produce 159 of iodide; therefore, to produce 1 part of iodide, 0.793 part will be required. The amount of sulphur may be determined in the same manner. 32 parts produce 159 of iodine; 0.201 part will therefore be required to produce 1 part.

#### ORDER OF MERIT.

##### NUMBER OF MARKS AWARDED FOR ANSWERS.

Questions	I.	II.	III.	IV.	V.	EXTRA.	Total
1. H. MacLagan, Lindsay	6	6	6	6	6	10	35
2. W. A. C., Orono	6	5	5	5	5	5	30
3. W. M. Rose, Toronto	5	5	2	5	5	0	22
4. Price Jackson, Toronto	4	5	1	5	5	0	20
5. Orygen, Toronto	5	5	1	1	5	0	17

### ONTARIO COLLEGE OF PHARMACY.

#### MONTHLY MEETING.

The regular monthly meeting was held at the usual place, on Friday evening, 14th inst., with the Vice-president in the chair.

After reading and adoption of the minutes of last meeting, letters were read from Messrs. Scott and White, regarding the display of certificates in branch establishments, from Mr. W. P. McLaren, as to the granting of a certificate to a retired druggist, and from Mr. Wyllie, respecting his position with the Society.

The Secretary said he had received no answer from Mr. Scott, to the questions proposed at the last meeting, and a discussion was entered into regarding the powers of the present meetings to deal with these communications, and it was moved by Mr. Hodgetts, and seconded by Mr. Love, That the Secretary be instructed to call a meeting of the Council for Wednesday, 26th inst., to make preliminary arrangements for carrying out the purposes of the Pharmacy Act. Carried.

Mr. R. W. Elliot, on behalf of the printing committee, wished to know the opinion of the Society, as to the insertion of advertisements in the Poison Books, to be printed. He thought it might be a source of profit to the College, but many thought with him, that it would not be advisable. It was moved by Mr. Hunter, and seconded by Mr. Shuttleworth, That advertisements be inserted in the poison books at the discretion of the printing committee—carried. In reply to a question, Mr. Elliot said that it was intended to insert a list of antidotes to the principal poisons.

Meeting adjourned.

HENRY J. ROSE, Sec.

The Secretary of the College wishes us to state, in answer to numerous inquiries, that there is an unavoidable delay in the notification of arrears to members, which will be remedied in a few days.

#### LIST OF

### MEMBERS AND ASSOCIATES

OF THE

#### Ontario College of Pharmacy

Who are entitled to Registration under the Act.

#### MEMBERS.

Aylesworth, J. ....	Tamworth.
Barr, John Alexander .....	Hamilton.
Butterfield, John A. ....	Norwood.
Brendon, F. ....	Brantford.
Britton, Charles .....	Lindsay.
Bowman, W. H. ....	Berlin.
Bogart, D. P., M.D. ....	Carleton Place.
Barclay, M. T. ....	Wardville.
Bray, Wm. ....	Bothwell.
Brown, James .....	Ottawa.
Brydon, William .....	Toronto.
Barker, W. J. ....	Trenton.
Berry, G. W. ....	Lucknow.
Brent, Charles .....	Port Hope.
Burgar, J. H. ....	Welland.
Card, W. A. ....	Orono.
Carra, Thomas .....	Meaford.
Chandler, E. ....	Belleveille.
Chandler, Jr., E. ....	Belleveille.
Jasselman, Charles .....	Winchester.
Coad, James .....	Woodstock.
Cullingford, John .....	Cobourg.
Carpenter, E. R. ....	Collingwood.
Colclough, James .....	Mount Forest.
Cornack, J. G. ....	Pembroke.
Combe, Jas. H. ....	Clinton.
Coombs, Joseph .....	Smith's Falls.
Conklin, W. P. ....	Tilsonburg.
Charters, James A. ....	Belleveille.
Cottrell, G. W. ....	London.
Coombs, John S. ....	Perth.
Dale, J. B. ....	Wyoming.
Dale, W. H. ....	Petrolia.
Davidson, Hugh .....	Walkerton.
Dawson, C. ....	Warkworth.
Dagg, Wm. ....	Tiverton.
Dilworth, Joseph, .....	Toronto.
Dyas, W. J. ....	Strathroy.
Everest, George M. ....	Arkona.
Ellis, G. ....	Brantford.
Evans, Wm. J. ....	London.
Foster, W. D. ....	Simcoe.
Frazer, Thos. B. ....	Napanee.
Fothergill, R. ....	Newcastle.
Fead, S. G. M. ....	Orangeville.
Frleigh, S. ....	St. Mary's.
Fleming, W. F. ....	Ottawa.
Fead, William .....	Stouffville.
Green, W. A. ....	Walkerton.
Greenwood, W. W. ....	St. Catharines.
Gregory, E. ....	Lindsay.
Gissing, A. W. ....	Princeton.
Gray, Robert B. ....	Pembroke.
Gemmell, F. A. ....	Sarnia.
Greaves, Joseph .....	Collingwood.
Hopkins, J. F. ....	Dundas.
Huffmann, T. A. ....	Napanee.