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ABSTRACTS OF PAPERS PUBLISHED IN OTHER JOURNALS.

FOODS AND DRUGS ANALYSIS.

Refractive Indices of Salad Oils—Correction for Temperature. L. M. Tolman and L. S. Munson. (*Journ. Amer. Chem. Soc.*, xxiv., 754.)—The authors find that, using a Zeiss butyro-refractometer, the variation in the refractive index for 1° C. is practically constant at 0·000365 for ordinary oils, although the variation of the scale-reading of the instrument is not constant, since the scale is an empirical one. The most accurate way to correct scale-readings for temperature is to calculate the refractive index from the scale-reading found, correct it by means of the above factor, and then calculate back to the scale-reading. For variations of a few degrees only the formula—

$$R = R' - X(T - T')$$

may be used, where R = reading corrected at T, R′ = reading at T′, T = desired temperature, and T′ = temperature of actual reading, and X = change in scale division caused by a change in temperature of 1° C. For scale-readings of 40° to 50°, X equals 0·55; from 60° to 70°, 0·58; and from 70° to 80°, 0·62.

The oils examined were: olive, poppy-seed, maize, sunflower, rape, white mustard, black mustard, lard, pea-nut, cotton-seed, and sesame. A. G. L.

Composition of Kissi Pepper. A. Barillé. (*Journ. Pharm. Chim.*, 1902, xvi., 106-116.)—The pepper known as *Piper Famechoni-Heckel*, or Kissi pepper, is obtained from a new species of *piper* growing in French Guinea. The fruit resembles miniature bunches of grapes, and when pulverized yields a reddish-brown powder with a characteristic aromatic odour and a somewhat acid taste. It has been

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used for some time past by the Soudanese troops in place of ordinary pepper. According to the results of the author's analysis, it has the following composition:

	Per Cent.
Water	14·60
Ash, soluble in water	3·61
Ash, insoluble in water	0·94
Volatile oil	4·47
Piperine	3·70
Starch	38·00
Cellulose	10·01
Glucose	5·21
Saccharose	1·66
Proteids	10·24
Gums, colouring matter, and soluble nitrogenous substances	5·27
Resins and fixed oil	3·95
Alcoholic extract	19·25
Ethereal extract	16·07
Total nitrogen	1·82

C. A. M.

On the Determination of Aconitine in Certain Preparations of Aconite. H. Ecalle. (*Journ. Pharm. Chim.*, 1902, xvi., 18-23.)—In the case of aconite preparations made with glycerin and alcohol it is only possible to extract a very small proportion of the aconitine by treatment with ether. The author has therefore made experiments as to the possibility of effecting a complete precipitation of the alkaloid by means of silico-tungstic acid in the presence of a slight excess of nitric acid. He finds that the aconitine silico-tungstate is soluble to some extent in glycerin, and that it is necessary to use a large excess of silico-tungstic acid and nitric acid to prevent this. The amount of aconitine is found by multiplying the weight of the dried and ignited precipitate by the factor 0·793. C. A. M.

TOXICOLOGICAL ANALYSIS.

Notes on the Detection of Mercury in Cases of Poisoning. D. Vitali. (*Boll. chim. farm.*, 1902, xlii., 149; through *Chem. Zeit. Rep.*, 1902, 173.)—Mercuric sulphide, precipitated by sulphuretted hydrogen, is not wholly unattacked by nitric acid; if it is boiled for some time with equal quantities of nitric acid and water, it is partly oxidized and converted into nitrate, and this nitrate combines with the excess of sulphide to form a white double compound, which looks much like lead sulphate. This compound is identical with that already described by Rose, which was produced by treating a solution of mercuric nitrate with an insufficient quantity of sulphuretted hydrogen. If, then, the precipitate given by sulphuretted hydrogen yields a white powder with nitric acid, it must be investigated like the black sulphide of mercury. Vitali states that several undoubted cases of mercury-poisoning have occurred in which the metal has been missed on analysis, and he suggests that the above reaction is the cause of the error. F. H. L.

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