

## Reports of A. Ph. A. Committees

### THE PROGRESS OF PHARMACY

Abstracts from the Report on the Progress of Pharmacy for the year 1911, by C. Lewis Diehl, Reporter:

(Third Installment.)

*Alkaloids: Method of Volumetric Estimation Prescribed in Pharm. Germ. V.*—In a review of the directions of the Pharm. Germ. V for the volumetric estimation of alkaloids, Dr. R. Gaze observes that the shaking out of the original alkaloid solution with hydrochloric acid of  $\frac{1}{2}\%$  is usually not attended with any difficulty. Clarification may be hastened under circumstances by the addition of a little more acid and gentle rotation; or, in obstinate cases, by filtration through a small filter containing a little tuft of cotton. The shaking out with chloroform, however, after rendering the acid extractions alkaline, sometimes occasions considerable trouble. The chloroform separates in minute drops which will not coalesce. In such cases, coalescence may be effected by carefully heating the separatory over a water bath; or, by using at first only a portion of the chloroform (2.5 Cc.) and, after shaking several minutes vigorously, and subsidence of the chloroform in small drops, adding 5 Cc. more of the chloroform and then gently shaking the mixture to and fro, holding the separatory in a horizontal position.—Apoth. Ztg. No. 31, 301.

*Quinine: Estimation as Acid Citrate.*—The results of the estimation of quinine in organic liquids, such as urine, by direct extraction of the alkaline liquid with ether, are very unreliable, the quinine obtained being contaminated with resinous and coloring matter. To obviate this source of error, Nishi proposed a method in 1909 ("Analyst," 34, 443), by which the quinine, dissolved in ether, is precipitated as acid citrate by the addition of an ethereal solution of citric acid. T. Cockburn and J. W. Black now confirm the accuracy and reliability of this method by a series of estimations carried

out with it, but propose a modification of the method which renders the details of the process described by Nishi less cumbersome. As claimed by Nishi the compound formed is of constant composition, corresponding to an acid citrate having the formula  $C_{20}H_{24}N_2O_2 \cdot C_6H_8O_7$ , containing theoretically 62.79% of quinine, while in practice an average of 62.95% was obtained by these authors and 62.57% by Nishi. The general characteristics of the acid citrate also corresponds with those given by Nishi. The compound is almost completely insoluble in ether, slightly more soluble in cold water and in alcohol, but readily soluble in hot water. Without going into the details of the method, which may be consulted in the original, it may here be stated that the impure quinine, obtained by the usual shaking out process and completely dried is dissolved in anhydrous ether, precipitated with a specified quantity of saturated ethereal solution of citric acid, allowed to stand 24 hours, the precipitate collected in a filter-tube, washed with specified quantities of ether, and dried to constant weight. The saturated solution of citric acid is obtained by dissolving citric acid, previously dried *in vacuo*, in anhydrous ether.—Pharm. Journ. and Pharmacist, Sept. 16, 1911, 380-381.

*Arsenic: Possible Fallacy of Fleitmann's Test.*—In a recent case of dietetic arsenical poisoning, it was found expedient to examine the urine of the affected person for traces of arsenic some six weeks after the poison had been taken, the medical man who undertook the examination, employing the well-known Fleitmann's test, and finding by this test that arsenic was still being excreted. Walter J. Dilling, doubting the probability of arsenic being excreted in the urine six weeks after the ingestion of a single subtoxic dose, performed control tests by means of Reinsch's and Marsh's methods. These proved completely negative, while Fleitmann's reaction appeared to indicate the presence of arsenic in this particular sample of urine, and also in a sample of normal urine. This reaction

depends on the reduction of silver nitrate by means of arsenuretted hydrogen, generated from the material under examination, to metallic silver, causing a purplish-black spot to appear on paper impregnated with the reagent. On looking into the matter to discover the cause of this reaction from urine free from arsenic, the author found that uric acid was the principal substance responsible for the result, but that this reduction will only occur if steam issuing from the mouth of the tube containing the reacting material comes in direct contact with the moistened silver-nitrate paper placed over it. If the reacting material is heated only until a current of hydrogen bubbles is evolved and no longer, and the silver-nitrate paper then placed over the mouth of the tube, the danger of reduction by steam is avoided. The author finds that other members of the xanthine series, besides uric acid, such as caffeine, theobromine, xanthine, and guanin, will also cause the purple-black spot resembling the arsenical reaction under the conditions described.—Phar. Jour. and Pharmacist, Dec. 16, 1911, 811.

*Phosphoric Acid: Volumetric Methods of Estimation.*—After a comparative review of the different methods for the quantitative estimation of phosphoric acid described in the literature, W. Strecker and P. Schiffer arrive at the conclusion that the volumetric method with uranium salts is quite as accurate as the gravimetric method usually relied upon. They furthermore find that the method depending on the precipitation of phosphoric acid with volumetric silver nitrate solution in acetic acid solution, and titration of the excess of silver nitrate with ferrous cyanide, gives values which are in no respect less accurate than those obtainable by gravimetric methods.—From Zschr. f. analyt. Chem., 1911, No. 8.

*Chlorides: Estimation of Bromides.*—Otto Herting recommends the following new method for the detection and estimation of chlorides in bromides, which is based upon the observation that when bromides are heated with lead peroxide in acetic acid solution the bromine is liberated, whereas the chloride remains unchanged: 3 Gm. of the bromide, 6 Gm. lead peroxide, and 50 Gm. Acetic Acid (50%) are heated together in a 200 Cc. flask on an asbestos plate, rotating the flask occasionally, until bromine vapor

ceases to be eliminated and the mixture begins to assume syrupy consistence; whereupon the flask is removed from the fire. The cooled mixture is diluted with water, filtered and the filter well washed; then 20 Cc. of concentrated nitric acid are added to the filtrate, followed by 15 Cc. of 1/10 N. silver nitrate solution, and after the further addition of 5 Cc. of ferric nitrate, it is titrated with 1/10 N. potassium ferricyanide solution.—Pharm. Ztg. LVI (1911), No. 25, 253.

*Hexamethylenamine: Quantitative Estimation in Urine.*—F. Schröter recommends the following method for the quantitative estimation of hexamethylenamine in urine: To 1000 Cc. of the urine 10 Cc. of 25% acetic acid are added (to prevent subsequent precipitation of creatinine) and the mixture is precipitated with 80 to 120 Cc. of solution of corrosive sublimate, saturated at 30° C. After subsidence, the precipitate is collected on a filter, washed with corrosive sublimate solution, transferred to a flask with 10 to 15 Cc. of concentrated solution of sodium chloride and digested on the water bath. The hexamethylenamine-corrosive sublimate compound ( $C_6H_{12}N_4 \cdot 2HgCl_2$ ) is thus dissolved, while the uric acid precipitated with it remains undissolved. The solution is filtered and the mercury precipitated as oxide from the filtrate by means of potassium hydroxide. The precipitated mercuric oxid being now removed by subsidence and filtration, the filtrate is treated by Kjeldahl's method for the estimation of nitrogen and the quantity of hexamethylenamine present in the urine calculated from the figures so ascertained.—Arch. f. Exper. Pathol. u. Pharmakol, 1911, 161.

*Plants: Conservation of Color and Appearance.*—Wimmer describes a method for the conservation of plants (herbarium specimens) which consists in impregnating them with a saturated solution of naphthalin, to which, in order to remove its alkaline reaction on violet and red coloring matters, 1 or 2 drops of a concentrated solution of salicylic acid in absolute alcohol are added for each 100 Gm. Simple immersions into this solution usually suffices. Tender plants should be treated by means of a drop-glass, while coarser, fleshy plants must be immersed in the solution for some time. Hollow plant-parts, such for example as bell-shaped flowers, are best coated on the interior and then

on the outer surface. By the described method the natural colors of plants are perfectly preserved.—Schweiz. Wschr. f. Chem. u. Pharm. XLIX (1911), No. 15, 210; from Oesterr. Botan. Zschr. LX, 202-204.

*Medicinal Plants: Sterilization and Drying.*—Em. Bourquelot, discussing the question of preserving and drying plants, observes that the soluble ferments contained in them continue to exert their oxidizing and hydrolytic action during the process of drying, thus causing the loss of a large proportion of their active constituents. It follows that a preliminary sterilization is necessary to prevent this untoward change, and this can be accomplished only by immersing the plant, immediately after collection in boiling alcohol, most conveniently in an apparatus specially devised by the author and his collaborator Hérissé. The question of what is the best method for the subsequent drying is, however, as yet an open one. Possibly, the method of drying the plants in a vacuum at 0°C, as proposed by Choay, may prove such; but, fortunately, it is found in practice that if the methods of drying commonly in use are carefully conducted, the loss of active constituents by fermentative action is reduced to a minimum, and preliminary sterilization can be omitted if the plants are rapidly and carefully dried immediately after their collection. The author finds a criterion by which the proper execution of the drying process may be estimated in the fact that the content of saccharose is increased proportional to the drying period in the roots, and decreased in the leaves.—Journ. de Pharm. et Chim, 1910, No. 4.

*Juniperus Procera*, Hochst: *Examination of a Useful East African Cedar.*—Schimmel & Co. recently received for examination a parcel of the wood of an East African species of cedar, of which large forests have been discovered in German East Africa, and which is apparently very suitable for pencil-making. According to Dr. Giessler this wood was derived from *Juniperus procera*, Hochst, a tree which occurs in the mountains of Abyssinia and Usambara, as well as on the slopes of Kilimanjaro and Kenia, growing at an altitude of from 4500 to 9000 feet and in Usambara forming extensive forests. In its anatomical structure the wood bears a close resemblance to that of *Juniperus virginiana*.

The Volatile Oil was distilled from two

kinds of raw material—shaving and short planks. The oil from the shavings (yield 3.2%) was a deep yellow liquid, had a distinct odor resembling vetiver, and gave the following constants:  $d_{15}^{\circ}$ , 0.9876;  $ND_{20}^{\circ}$  1.50893; acid val., 8.4; ester val., 8.4; ester val. after acetylation, 70. Soluble in 1.6 vols. ad more of 80% alcohol, and in one-half its own vol. and more of 90% alcohol. The Oil from the short planks (yield 3.24%) formed at ordinary temperature a semi-solid mass studded with crystals. When drained off from the crystals the oil gave the following constants:  $d_{15}^{\circ}$  1.0289,  $ND_{20}^{\circ}$  1.51011, acid v., 27.06; ester v., 7.93; ester v. after acetyl., 89.6. The oil was soluble in 2 vols. a. m. 80% and in one-half its own vol. 90% alcohol. The crystals consisted of cedar camphor. Schimmel's Rep., Oct., 1911, 105-106.

*Coniferous Seeds: Characters of Their Fixed Oils.*—C. Grimme remarks that, in view of the fact that the fatty oils from the seeds of some conifers are valuable constituents of lacquers and varnishes, on account of their great drying properties, it is a matter for surprise that very little has been published in regard to the characters of these oils. Examination of the oils from the seeds of nine different conifers gave the results recorded below. Eight of the species are European, while the ninth, *Pinus Gerardiana*, from the East Indies, is an article of commerce. Omitting the tabulated statement of the constants determined by the author, which must be referred to in the abstract quoted, it may be stated that all the oils had strong drying properties—the other characters and yield being as follows:

(1) *Pinus silvestris*, L. (*Pinus pinaster*, Ait; *Pinus maritima*, DC.). Yield: 32.1%. Very viscous, brownish-yellow, aromatic turpentine-like odor and taste.

(2) *Pinus montana*, Mill (*Pinus pumilio*, Haenke; *Pinus Mughus*, Scop.). Yield: 29.6%. Thick, yellow, showing a green opalescence in reflected light; aromatic turpentine-like odor and taste.

(3) *Pinus cembra*, L. Yield: 35.7%. Very viscous, yellow; aromatic odor and pleasant sweetish taste.

(4) *Pinus picea*, L. (*Abies pectinata*, DC.; *Pinus abies*, Du Roi; *Abies Alba*, Mill; *Abies picea*, Lam.; *Abies taxifolia*, Desf.; *Abies vulgaris*, Poir; *Abies excelsa*, Lk.). Yield:

32.8%. Brilliantly clear, brown-yellow; aromatic turpentine-like odor and taste.

(5) *Pinus abies*, L. (*Picea vulgaris*, Lk.; *Abies excelsa*, DC.; *Pinus picea*, Du Roi; *Pinus excelsa*, Lam.). Yield: 31.6%. Golden yellow; aromatic odor and taste.

(6) *Pinus pinea*, L. Yield: 21.8%. Thick, brown; pleasant odor and taste.

(7) *Pinus Gerardiana*, Wall. Yield: 30.7%. Very viscous, greenish-yellow; pleasant aromatic odor and taste.

(8) *Cupressus sempervirens*, L. Yield: 10.8%. Green, turbid at ordinary temperature from separation of crystals; characteristic aromatic odor and taste.

(9) *Thuja occidentalis*, L. Yield: 15.0%. Green, rather thick, slightly turbid at ordinary temperature; characteristic aromatic odor and taste.—Chem. Ztg., Aug. 29, 1911.

*Camphor: Loss by Vaporization when Stored in Paper Cartons.*—Alex. Gunn directs attention to the loss, not usually taken into account, when "Flowers of Camphor" is stored in cardboard cartons, as is now the prevalent practice. Such a carton, containing about 10½ oz., lost 250 grains in weight when stored in a warehouse, not artificially heated, during winter's month, equal to 11% per annum—though it would have been more likely 15% if stored during the entire year, including the six summer months.—Pharm. Journ. and Pharmacist, Dec. 16, 1911, 811.

*Camphor-Trees: Abundant Occurrence in German East Africa.*—D. E. Hutchins, lately Conservator of Forests, communicates some interesting information on the natural occurrence of camphor-trees in German East Africa. According to this authority, the camphor-tree is abundant and shows a good natural production in a forest situated in the neighborhood of Wilhelmstal and leased by a Mr. Wiese. At one place in the West Usambara Mountains, for example, Hutchins counted 26 seedlings of camphor on 20 square yards. Their appearance, he states, was more vigorous than that of the suckers which constitute 99% of the reproduction in British East Africa. Unfortunately, Hutchins omits to state whether the tree is botanically allied to the true camphor-tree (*Cinnamomum Camphora*). Hutchins regards it as curious that neither the botanical staff at the Imperial German Biological-Agricultural Institute at Amani nor the forest officials at Wil-

helmstal had recognized the tree.—From Agric. Jour. Brit. East Africa, through Chem. and Drug. 79 (1911), 18.

*Rheum Palmatum: Identification as the Source of Medicinal Rhubarb.*—Dr. C. C. Hosseus, having received from Dr. Albert Tafel, the well-known Tibetan explorer, his interesting botanical collection for examination, had the opportunity of making a thorough study of the botanical source of medicinal rhubarb as revealed by five rhubarb plants included in this remarkable collection. Beginning his work in 1909, in the Botanical Museum at Berlin, it has just been completed in the Kew-Herbarium, London, with results which justify the conclusion that the best medicinal rhubarb is derived only from *Rheum Palmatum*, L., thus confirming the previously expressed view of Maximovicz, Tschirch, and Wilson, that the best rhubarb comes from *R. palmatum*, and that this species is the one that should be cultivated. The view that was formerly taken, that the "Southern" rhubarb from Szechuan comes from *R. officinale*, and the "Northern," from Kuku-noor, from *R. palmatum*, var. *R-tanguticum*, has given way to that which regards *R. palmatum* as the true source. The error is explained by a statement of Dr. Tafel's that the Tibetans dig the roots of other kinds of rhubarb and make a show of drying them, and profess that they obtain medicinal rhubarb from them, in order to mislead Europeans. Dr. Tafel himself collected specimens of *R. spiciforme*, with which the Tibetans tried to deceive him in this way. Another error which has got into the literature of the subject, which is now cleared up, is in regard to the use of the terms "high-dried" and "sun-dried." It has been supposed that the "high-dried" rhubarb was dried by artificial heat, but it appears that this is not so; most of the rhubarb that is gathered is peeled and dried at once, the rhizomes being strung on lines stretched from one tree to another, in the cedar woods where the best Shensi rhubarb is known as "sun-dried." "High-dried" rhubarb is dried in a shady part of the houses, usually under the roofs; the term "high" refers to its position, and not to the temperature employed.

In the oldest literature of the subject it is stated that the drug is obtained from one species, which comes from Tanguten land. Some confusion has arisen through the use

of the names Tangutans and Tibetans, which have been supposed to indicate different peoples; but the fact is that the whole of Eastern Tibet, from Lake Kuku-noor in the north to the Himalayas in the south, is inhabited by one people, speaking Tibetan, who call themselves Tibetans or Tangutans indifferently, the names Tangut and Tibet both referring to the country, like the names Cathay and China. Prof. Tschirch has received some seeds from Dr. Tafel, and these under the care of the head gardener, Mr. Schenck, have germinated splendidly, so that a reasonable hope is entertained that the plant will again be prevalent in European gardens.—Arch. d. Pharm. 249 (Aug. 26, 1911), 419-424.

*Indian Hemp: Production in Greece.*—L. Rosenthaler, reporting the result of a chemical comparison of Grecian Cannabis Indica with Indian hemp produced in India, says that the cultivation of Indian hemp in Greece is confined to a limited area in the neighborhood of Tripolitza, where in normal years from 3 to 4 million kilos of the herb are produced—the entire product being converted into hashish in Tripolitza itself during the months of December and January, in which months dry north winds prevail; the yield is about 10 percent. The hashish is not used in Greece, but is exported, part to Europe and part, indirectly, to Egypt. A sample of Grecian hemp was examined in comparison with a sample of the Indian drug; the former gave 23.9 percent. soluble in alcohol and the latter 21.2 percent. The Grecian drug gave 0.390 percent. of volatile substance, which absorbed 0.4344 of iodine; the Indian gave 0.316, which absorbed 0.3956 of iodine. Cannabinol was determined by distilling 25 Gms. in steam until 2 litres of distillate was collected, thoroughly extracting this with ether, drying the ethereal liquid with anhydrous sodium sulphate, and distilling off the ether; the residue was dried for twenty-four hours in a desiccator, weighed, and the amount of iodine which it would take up determined by the method of Messinger and Vortmann for the determination of phenol. The results of this investigation, although not conclusive as regards the relative activity of the two drugs, cannot be regarded as being unfavorable to the Grecian drug.—Apoth. Ztg. XXVI (1911), No. 65, 678.

*Oenanthe Crocata, L.: Proximate Examination.*—Frank Tutin has subjected *Oenanthe*

*Crocata, L.*, a poisonous Umbellifer common in England and Western Europe, to proximate examination, the material consisting of the entire dried plants which had been specially collected for the purpose in early spring, and therefore represented chiefly the tuberous roots. These, which somewhat resemble parsnips, were found to be devoid of enzyme, and no part of the plant, at any stage of growth, contained an alkaloid.

An alcoholic extract of the plant, when kept for some time deposited an amount of crystalline cane sugar equivalent to 3.8 percent. of the weight of dried material employed. This extract, when distilled in a current of steam, yielded a yellow essential oil possessing a somewhat unpleasant odor. This oil had the following constants:  $d_{15^{\circ}/15^{\circ}}=0.9381$ ;  $a_D+1^{\circ}16'$  in a 25 Mm. tube. From the portion of the alcoholic extract which was soluble in water there were isolated a small amount of a colorless crystalline substance (m.p.  $83^{\circ}$ ) which, on keeping, assumed a purple color. It also contained some amorphous products and a very large amount of dextrose and laevulose.

The portion of the extract which was insoluble in water consisted of a dark-colored, viscid resin amounting to nearly 3 percent. of the weight of the plant employed. From this material the following compounds were isolated: Triacontane,  $C_{30}H_{62}$ ; hentriacontane,  $C_{31}H_{64}$ ; a phytosterol (m.p.  $135^{\circ}$ ); ipuranol,  $C_{29}H_{58}O_2(OH)_2$ ; palmitic acid; and a mixture of unsaturated acids, consisting chiefly of linolic acid. The greater amount of the material insoluble in water was, however, of a resinous nature. The neutral portions of the petroleum and ether extracts of this resin represent the toxic principle of the *Oenanthe crocata*.—Pharm. Jour. and Pharmacist, Aug. 26, 1911, 296-298.

*Fern Rhizomes: Anthelmintic Value of Various Sorts.*—In view of the statement that the ethereal extract of *Dryopteris dilatata* is at last four times as active as the corresponding extract of the official *Aspidium filix-mass* rhizome, and has therefore been suggested to replace male fern in the various pharmacopœias, H. Rosendahl has examined a number of anthelmintic fern rhizomes, his results confirming the superiority of *Dryopteris dilatata*. The yield of ethereal extract is about the same (10%); but while it takes from 8-10 Cm. of oleo-resin of *Aspidium* to

drive off the *Bothricephalus latus*, it requires only 2 Gm. of the oleo-resin prepared from the rhizome of *Dryopteris dilatata*, or 4 Gm. of that from *D. dilatata* var. *spinosa*—the latter yielding, however, as much as 17% of oleo-resin. The rhizomes of other ferns yielded very small percentages of oleo-resin: *Filicis aquilini*, 2%; *Filicis feminae*, 0.9%; *Filicis Alpetris*, 0.7%. Under the microscope these extracts exhibit various crystalline structures which serve well for their identification.—Svenck Farmaceutisk Tidskrift, 1911, No. 5, 85-89.

*Extract of Male Fern: Frequent Adulteration with Castor Oil.*—Ernest J. Parry has examined twenty samples of extract of male fern obtained from various sources, and found them, with a single exception, adulterated with castor oil, amounting to from 30 to 60%. These adulterated extracts were all of the same type, and much brighter green in color than the genuine extract. The author has determined the

*Constants of Genuine Extract of Male Fern*, carefully prepared according to the official process by Mr. J. C. Umney, to be as follows: Sp. gr. at 15, not below 1.000, usually 1.025.

*Refraction Index* at 20°, not below 1.500, usually 1.5050-1.5090.

*Solubility in Petroleum Ether*, complete in 10 volumes, with exception of a little flocculent matter, but no oily separation.

*Saponification Value*, 230 to 250; unsaponifiable matter not above 8 to 11%.

*Fatty Acids*, should have a mean combining weight of from 240 to 255.

*Crude Filicin*, determined by the Pharm. Helv., should not be below 20%, usually 22 to 23%. This is regarded as of greatest importance—the test being carried out as follows: 5 Gm. of the extract are dissolved in 30 Gm. of ether, and the solution is well shaken with 100 Gm. of a 3% solution of barium hydroxide for 5 to 10 minutes. After complete separation, the aqueous liquid is filtered, and 85 Cc. of the filtrate (=4 Gm. of extract) is acidified with 2.5 Cc. of strong hydrochloric acid and shaken out four times with ether. The ethereal extracts are mixed, filtered, evaporated, and the residue is dried at 100° to constant weight.—Pharm. Jour. and Pharmacist, Dec. 9, 1911, 778.

*Oleoresin of Male Fern: Dose Depending*

*on Method of Administration.*—While the German Pharmacopœia prescribes a maximum daily dose of 10 Gm., Dr. Drenkhaw has hitherto always given extract of male fern in doses of 15 to 20 Gm. to adults and 8 to 10 Gm. to children without ever observing symptoms of poisoning. This is perhaps due to the method of administration adopted; the poisonous principle, filicic acid is nearly insoluble in water, but soluble in alkalis and fats, and these are therefore carefully avoided, in order that filicic acid shall not be absorbed when in the intestine. A dose of cascara or rhubarb is first given, if necessary, but castor oil and alkaline laxatives are avoided; all fat food is forbidden on the day on which the extract of male fern is given and the following day. A large quantity of raspberries is given overnight, and in the morning a cup of sweet black coffee, without bread, and after an hour's interval 3 Gm. of male extract every ten minutes, or 5 Gm. of male fern every fifteen minutes, with sweetened diluted lemon-juice or solution of citric acid; the quantity of the extract thus taken in an hour is 18 to 20 Gm. If evacuation of the bowels does not occur within an hour after the last dose, it is followed by a dose of 0.6 Gm. of calomel.—Apoth. Ztg. from Münch. Med. Wschr., 1911, 2020.

*Pine Needle Oil from Pinus Pumilio: New Oxygenated Constituents.*—E. Böcker and A. Hahn have isolated several new oxygenated bodies from the oil of the needles of *Pinus pumilio*. An oil, which had been freed from terpenes and sesquiterpenes (b. p. 85° to 178°; 13 MM.), was split into several fractions. The fraction boiling between 148° and 160° yielded a liquid of faint balsamic odor, having the elementary formula  $C_{16}H_{26}O$ , which is probably an *aldehyde*. The fraction boiling between 127° and 148° (13 MM.) yielded a laevorotatory body,  $C_{16}H_{24}O$ , which is probably a *ketone*. The third fraction, boiling between 87° and 95° (14 MM.), yielded a volatile oil possessing the peculiar aroma of pumilio pine needle oil, to which the authors have given the name

*Pumilone.*—It has the formula  $C_8H_{14}O$  and possesses the following properties: It is a saturated body and is present in the original oil in the amount of about 1 to 2%.—From Jour. f. Prakt. Chem. II, 83 (1911), 489.

*Olive Oil: Method of Bleaching Practiced in Italy.*—According to a French Consular report, consumers of olive oil are coming more

and more to give preference to an oil of pale amber color, in place of the natural golden yellow or greenish, and the producers of the oil are accordingly driven to removing the color of the oil by artificial means. Citric and tannic acids are both employed for this purpose, especially the latter. If much color is to be removed, about 5 percent. of tannic acid is used; for medium-colored oil, 3 percent. suffices, and for paler oils from 1 to 2 percent. The tannic acid is dissolved in water, the solution added to the oil, and

mixed for fifteen minutes; after half hour the mixture is poured into another vessel, and some hours later it is poured back into the first and allowed to stand for three days, when the oil is drawn off. Some oils can be sufficiently decolorized by water alone, the oil being broken up into small drops and allowed to fall into water from a height of several metres. This method is most successful in the open air in bright, sunny weather.—Schw. Wschr. f. Chem. u. Pharm. XLIX (1911), No. 34, 476.

### REPORT OF THE COMMITTEE ON UNOFFICIAL STANDARDS.

The following portion of the report of the Committee on Unofficial Standards relates to certain crude drugs and chemicals suggested for inclusion in the next revision of the National Formulary, and by order of the Council is published in the JOURNAL in order to afford opportunity for discussion before the standards proposed are finally adopted.

Manufacturers, importers, analysts, and others interested in any of the proposed standards, are requested to send their criticisms and comments to the chairman of the committee, Geo. M. Beringer, 501 Federal St., Camden, N. J.

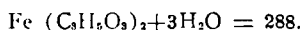
### APPROVED MONOGRAPHS SUBMITTED AS STANDARDS FOR UNOFFICIAL DRUGS AND CHEMICAL PRODUCTS.

(Continued from February issue—page 168.)

#### FERRI LACTAS.

##### IRON LACTATE.

##### Ferrous Lactate.



It should contain not less than 97 per cent of pure ferrous lactate. Keep in well-stoppered bottles.

A greenish white crystalline powder or crystalline masses, having a slight characteristic odor and a mild, sweet, ferruginous taste.

Slowly but completely soluble in 40 parts of water, and in 12 parts of boiling water; freely soluble in solution of alkali citrates yielding a green solution; almost insoluble in alcohol.

When strongly heated, the salt froths up, gives out dense white, acrid fumes, chars and finally leaves a brownish red residue.

The aqueous solution has a greenish-yellow color, a slightly acid reaction and gives a deep blue precipitate with potassium ferricyanide T. S. and a light blue precipitate with potassium ferrocyanide T. S.

A 2 per cent aqueous solution of the salt should not afford with lead acetate T. S. nor, after acidulation with hydrochloric acid, with hydrogen sulphide T. S. more than a whitish opalescence (limit or absence of citrate, tartrate, malate, etc., and of foreign metals).

The aqueous solution (1 to 20) acidulated with nitric acid, should not afford more than a slight opalescence with barium chloride T. S. (limit of sulphate) or with silver nitrate T. S. (limit of chloride).

If 25 Cc. of the aqueous solution (1 in 50) mixed with 5 Cc. of diluted sulphuric acid, be boiled for a few minutes, then precipitated by an excess of potassium or sodium hydroxide T. S., the filtrate, mixed with a few drops of alkaline cupric tartrate V. S., and heated to boiling, should not afford a red precipitate (absence of sugar).

If a portion of the salt be triturated with strong sulphuric acid, no offensive odor should be developed (absence of butyric acid), nor should any gas be evolved (ab-