

mulary; manufacturers therefore could not profit by any improvement which they might make and all research tending toward the improvement of such products would be discontinued. When it is remembered that the most important medicines are described in the Pharmacopœia, that many are included in the National Formulary which afterward find their way to the Pharmacopœia, and that many of the articles dropped from the Pharmacopœia are subsequently inserted in the National Formulary, it will be seen that no more effective bar to progress in the production of medicinal products, than the elimination of this clause from the law, could be devised. It may be pointed out that the standardization of extracts and tinctures as well as many other improvements could never have been introduced by manufacturers if no variation from pharmacopœial standards had been allowed. Under such a law while manufacturers in every other line would be stimulated by competition to improve their products, the manufacturer of medicines would be legally prohibited from doing so. The contributions of the chemist to this industry would then be confined to routine analytical work and to the development of products which could be protected by patents; all improvements in medicinal substances now included in the National Formulary and Pharmacopœia would have to be made by the committees of revision with limited time and facilities and without manufacturing experience. It seems doubtful if such a law could be enforced, but if the matter is placed before our law-makers in the proper light, there can be no doubt that the federal law will remain unchanged and that the state laws will conform to it in this respect. If this course is followed, the progress in this industry, which has never been as rapid as at the present time, will be uninterrupted.

FEDERAL JUDGE HOLDS THAT MAIL ORDER DRUG HOUSES CANNOT SELL MEDICINES CONTAINING HABIT- FORMING DRUGS BY MAIL.

Medicines containing habit-forming narcotic drugs, traffic in which is forbidden by the Harrison law, cannot be sold through a mail order business, Judge

J. E. Sater decided in Federal District Court at Columbus, Ohio, December 4. He dismissed a suit brought by the Dr. Nathan Tucker Asthma Specific Company of Mount Gilead, Ohio, to enjoin B. E. Williamson, Federal Internal Revenue Collector, from seizing the plant.

The court's decision declared medicines containing narcotic drugs may be prescribed by physicians only after a personal examination of the patient before each prescription. Diagnosis by mail is held illegal.

The decision is considered of far-reaching importance, since other proprietary remedies contain narcotic drugs or their derivatives and are sold by the mail order system.

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, George M. Beringer, 501 Federal St., Camden, N. J.

CARMEL

Caramel

Saccharum Ustum. Burnt Sugar Coloring.

A concentrated aqueous solution of the product obtained by heating sugar or glucose, to which has been added a small amount of alkali or alkali carbonate, until the sweet taste is destroyed and a uniform dark brown mass results.

Caramel is a thick, dark, brown liquid having the characteristic odor of burnt sugar and a pleasant bitter taste.

Specific gravity not less than 1.35 at 25° C.

On spreading in a thin layer on a glass plate, it appears homogeneous, reddish-brown and transparent.

Caramel mixes clear with water in all proportions. One part dissolved in one thousand parts of distilled water, yields a clear solution having a distinct sepia tint and the color of the solution is not changed or precipitated after exposure to sunlight for six hours.

It is soluble in diluted alcohol, but it is precipitated when the alcoholic content of the solution is increased to 80 percent by volume or more.

It is insoluble in ether, chloroform, acetone, benzene, petroleum benzine or turpentine.

20 mils of an aqueous solution (1-20), is not precipitated on the addition of .5 mil of phosphoric acid.

On incinerating Caramel, it swells and leaves a coke-like charcoal, which burns off only after prolonged heating at a high tem-

perature, and leaves not more than 8 percent of ash.

CHIONANTHUS

Chionanthus

Chionan. Fringe Tree Bark.

The recently gathered bark of the root of *Chionanthus Virginica* Linné (Fam. *Oleaceae*), with not more than 8 percent of other parts of the plant or foreign matter.

Usually in transversely curved pieces, occasionally in single quills, 1 to 10 cm. in length; bark 2 to 10 mm. in thickness; heavy, some pieces of the whole drug sinking when thrown into water; outer surface usually reddish-brown, occasionally grayish-brown, few transverse wrinkles, whitish cork patches and root scars; inner surface yellowish-brown, more or less striate and undulating; fracture short, hard, and coarsely granular due to projecting groups of stone cells; the broken surface of a light yellowish-white color.

Odor characteristic; taste bitter.

The powdered drug is light brown in color and when examined with the microscope exhibits; somewhat rounded, simple or 2-4 compound starch grains, mostly 0.003 to 0.010 mm. in diameter, occasionally up to 0.020 mm.; numerous stone cells, in groups and isolated, the walls thick, strongly lignified and with simple or branching pores; fragments consisting of light brownish thin walled cork cells; a large amount of parenchyma tissue, with many of the cells filled with starch grains. *Chionanthus* yields not more than 5 percent of ash.

CORYDALIS

Corydalis

Turkey Corn. Squirrel Corn.

The dried tubers of *Dicentra canadensis* (Goldie) Walp., usually somewhat mixed with the dried bulb-like portions of *Dicentra Cucullaria* (L) Bernh., (Fam. *Fumariaceae*), with not more than 5 percent of other parts of the plants or of foreign matter.

The tubers are rounded and frequently vertically depressed, the flattened surface more or less concave, up to 15 mm. in diameter; usually single, rarely two or more in a cluster; externally, minutely pitted or nearly smooth, grayish-brown, grayish-black or amber colored and more or less translucent; one of the flattened surfaces with a triangular scar from detached roots, the other usually with remains of the slender rhizome; fracture, hard and horny, exhibiting a yellowish waxy interior, or somewhat tough and granular exhibiting a yellow-white interior; nearly odorless; of a bitter taste.

The grains of the granulate bulb of *Dicentra Cucullaria* are plump ovoid or triangular ovoid and up to 12mm. in length; the larger grains distinctly concave on one surface, with a scar at the apex from the detached petiole, and usually attached to the short root-stock in clusters of three; the smaller grains usually separated from the rootstock, with an acute apex and a scar at the base; externally, yellowish or grayish-brown, usually translucent; fracture, hard and horny exhibiting a grayish waxy interior or granular and tough exhibiting a whitish interior; nearly odorless; of a slightly bitter taste.

The powdered drug is of a light yellow or of a yellowish-gray color, and when examined with the compound microscope exhibits: numerous oval, ovoid or oblong simple starch grains, the broad end of the grain sometimes truncate, up to 0.060 mm. in length and frequently with a cleft or horseshoe shaped fissure in the small end of the grain; occasionally two compound grains; altered starch grains up to 0.090 mm. in length; numerous angular or rounded parenchyma cells isolated or in groups and containing more or less altered starch grains the outlines of which are indistinct: tracheae few with reticulate, simple pores, annular or spiral markings; fragments of epidermal cells with thin brownish walls; sclerenchyma fibers very few or

wanting; few characteristic sclerotic cells from the root stock of *Dicentra Cucullaria* irregular in outline, mostly elongated up to about 0.750 mm. in length and 0.100 mm. in width, walls heavily lignified and porous and about 0.020 mm. thick, occurring isolated or in groups of from two to four; very few sclerotic cells from the rhizome of *Dicentra canadensis*, mostly isodiametric, uniformly smaller than in *Dicentra Cucullaria* and with walls about 0.012 mm. thick, not distinctly irregular in outline; a very few rosette aggregates of calcium oxalate, up to 0.020 mm. in diameter, from the portions of rhizome of *Dicentra canadensis*.

An infusion prepared by placing 5 grammes of ground or powdered corydalis in 100 mls of hot distilled water, stirring occasionally during ten minutes and then filtering is of a light amber color, gives an alkaloidal ppt. with potassio-mercuric iodide T. S. and a dark blue color with Iodine T. S. (soluble starch).

Corydalis yields not more than 8 percent of ash.

MATICO

Matico.

The dried leaves of *Piper angustifolium* Ruiz and Pavon (Fam. *Piperaceae*) with not more than 5 percent of stems, flower spikes, or foreign substances.

Usually in compressed, matted masses with leaves more or less broken. Leaves sessile, lanceolate, 10 to 20 cm. long, 2 to 5 cm. broad; apex tapering and acute; base slightly unequal, cordate; margin finely crenulate; upper surface dark green tessellated; lower surface pale green, reticulate with prominent yellowish-brown midrib and veins forming small quadrangular meshes clothed with matted pubescence.

Odor distinct, aromatic; taste pungent, pepper-like.

Sections viewed under the microscope exhibit: The epidermis, that of the upper side composed of regular polygonal cells and of the lower side of somewhat irregular and bent cells especially where covering the veins; numerous stomata and large bordering cells on the lower side; the hypoderm of 1 row and palisade cells in 2 or 3 rows; mesophyl of loose, spongy tissue; midrib in cross section oval, outer layer of thick walled

cork cells; secretion cells filled with yellow oil; upper surface with papillae and few bristly hairs; hairs of the lower surface of two kinds, the one 6 to 10 cells long, pointed, bent and matted and with thick walls and streaked cuticle; the other bristle hairs of one stem cell and a cap cell; calcium oxalate crystals few in parenchyma tissue of the venation, some raphides, others tabular.

Powder greenish-yellow and under the microscope exhibits the characteristic hairs, polygonal epidermal cells, and secretion cells of the leaf.

Matico yields not more than 18 percent of ash.

OLEUM BETULAE EMPYREUMATICUM RECTIFICATUM

Rectified Empyroligneous Oil of Birch.

Rectified Oil of Birch Tar. *Oleum Rusci Rectificatum*.

The empyroligneous oil obtained by the dry distillation of the bark and wood of *Betula alba* Linne (Fam. *Betulaceae*), rectified by steam distillation.

Limpid, dark brown liquid having a penetrating empyreumatic, tarry odor resembling that of Russian leather.

Specific gravity: 0.886 to 0.950.

It yields clear solutions with three times its volume of either absolute alcohol, ether, chloroform, glacial acetic acid, amyl alcohol, turpentine, benzole and carbon disulphide; not more than slightly turbid with the same volume of alcohol or purified petroleum benzine, and a decidedly turbid mixture with the same volume of methyl alcohol.

Warm 2 mls with 10 mls of distilled water, agitate and allow the mixture to cool, separate and filter the aqueous liquid. It should be colorless, have a strong empyreumatic odor and an acid reaction. 2 drops of potassium dichromate T.S. added to 4 mls of the aqueous filtrate produces a bright yellow solution which becomes darker and turbid. 1 drop of dilute ferric chloride solution (1 in 100) added to 4 mls of this filtrate produces a green coloration which changes to brown and becomes turbid (Distinction from Oil of Cade).

VANILLA

Vanilla Bean.

The cured, full-grown, unripe fruit of *Vanilla planifolia* Andrews (Fam. *Orchidaceae*).

Pods linear, flattened, from 15 to 35 cm. in length and from 5 to 9 mm. in breadth; summits terminating in flat circular scars; gradually tapering, more or less bent and curved or hooked at the bases, or in the Tahiti variety, broad in the middle and tapering towards either end, the base closely resembling the summit; externally blackish-brown, longitudinally wrinkled, moist-glossy, and occasionally with an efflorescence of vanillin in the form of acicular crystals or monoclinic prisms; frequently with narrow, elliptical or irregular, more or less wrinkled, dark-brown patches of cork; occasionally split into three parts near the tip, flexible and tough, 1-locular, containing a blackish-brown pulp and numerous blackish-brown seeds; the latter being flattened, irregularly triangulate or nearly circular in outline, reticulate and varying from 0.250 to 0.300 mm. in diameter; odor and taste characteristic and very agreeable.

Under the microscope, transverse sections of the pods of Vanilla show an epidermis with a somewhat thickened outer cuticularized layer having occasionally rounded or conical masses of the excretion of a gum-like substance; a layer of collenchyma of 1 or 2 rows of cells; a thick sarcocarp composed of parenchyma cells in which are imbedded an interrupted circle of fibro-vascular bundles; the parenchyma cells are deeply undulate in outline and usually contain a thin protoplasmic layer enclosing numerous oily globules or may contain bundles or raphides of calcium oxalate, the individual crystals varying from 0.200 to 0.400 mm. in length; some of the parenchyma cells are specially modified and distinguished by their somewhat thickened walls with long, oblique, slit-like pores or the thickening may extend in the form of broad, spiral bands; in the fibro-vascular bundles the phloem is central, being more or less surrounded by a few tracheae, the walls possessing slit-like pores or spiral thickenings, and at the outside of the bundle is a closed circle of sclerenchymatous fibers, the walls being thin, strongly lignified, pro-

vided with numerous, transverse, simple pores, the outer wall of the outer row of fibers being irregular or sinuate; from the inner walls of the endocarp arise the placentae bearing numerous brownish-red or blackish seeds; otherwise from the cells of the endocarp arise numerous long, nearly straight hairs, the ends being rounded, the hairs being more or less matted together by a gummy or resinous mass in which some of the seeds are held; in mounts made in hydrated chloral T. S. or potassium hydroxide T. S., the immature, brownish-red seeds show

a deeply reticulate seed-coat, the cells being of an oblong-polygonal form in surface view.

Place a few of the crystals, occurring as an efflorescence on the fruit, on a microscope slide or watch crystal and add a drop of phloroglucinol T. S. and hydrochloric acid, the solution immediately should acquire a carmine-red color (distinction from *benzoic acid*).

The amount of extractive, using dilute alcohol, should be not less than 12 percent.

Vanilla yields not more than 6 percent of ash.

STREET DIRT, UNPROTECTED FOOD AND DISEASE.

Prof. C. H. La Wall, chemist of the Pennsylvania dairy and food commission, is said to have found the following assortment of objects and substances in raisins exposed for sale on a Philadelphia street: Pieces of prunes; beans and rice; strands of human hair and cat fur; cotton and wool fiber; straw and bits of bran; insect wings and legs; cigar and cigaret ashes, and a yellowed cigaret paper. While it does not appear that any of these unappetizing accessories were exactly proved to be carriers of contagion, the findings strongly suggest the possibilities of infection from food sold from uncovered pushcarts and stands.

THE VISCOSITY OF LIQUID PARAFFIN.

The importance of the viscosity of liquid paraffin is engaging the attention of medical men. *The London Lancet* has shown that the viscosity is more important than the specific gravity, for whereas the specific gravity may be the same for different samples the viscosities vary considerably. The higher the viscosity the more suitable is the oil for medical use as an internal lubricant. The viscosity at 100° F. (Redwood) varied in a series recently examined from 440 to 67 seconds. Medical men are awakening to the importance of high viscosity in liquid paraffin, and pharmacists may receive inquiries on this matter.

NOTICE TO EXCHANGES, ADVERTISERS, CORRESPONDENTS, ASSOCIATIONS, BOARDS OF PHARMACY, MEMBERS, BRANCHES OF A. PH. A., ETC.

The Office of the Journal of the American Pharmaceutical Association has been moved from 63 Clinton Building, Columbus, Ohio, to Philadelphia Drug Exchange, Bourse Building, Philadelphia, Pa. All communications, publications, etc., for the Journal and Editor, E. G. Eberle, should be addressed accordingly.