

Report on the Progress of Pharmacy

For the Year 1912

(Tenth Installment.)

1. *Medicinal Plants. Comparative Activity.*—Dr. James Burmann has conducted a line of experiments since 1907, assaying each year fresh plants of aconite, belladonna, colchicum, *Digitalis ambigua* and *Digitalis purpurea*. The plants were wild grown; the aconite being collected in Canton Vaud; the belladonna around Aigle, the colchicum also around Aigle; the *Digitalis ambigua* in Canton Valais and *Digitalis purpurea* in Alsace. All were collected at flowering except colchicum, which was gathered at seeding time (June-July). The assays were by the gravimetric method of Keller; the digitalis species being assayed for digitoxin. The results are tabulated below:

Aconite (Percentage of aconitine).

1907—0.104%	1909—0.042%
1908—0.100%	1910—0.054%
1911—0.094%	

Belladonna (Percentage of Atropine).

1907—0.094%	1909—0.045%
1908—0.082%	1910—0.046%
1911—0.099%	

Colchicum (Percentage of colchicine).

1907—0.190%	1909—0.144%
1908—0.160%	1910—0.148%
1911—0.200%	

Digitalis ambigua (Percentage of Digitoxin).

1907—0.134%	1909—0.067%
1908—0.120%	1910—0.069%
1911—0.148%	

Digitalis purpurea (Percentage of digitoxin).

1907—0.078%	1909—0.033%
1908—0.063%	1910—0.037%
1911—0.070%	

Schweiz. Wschr. f. Chem. u. Pharm., L. (1912) No. 1, 2, H. V. A.

2. *Antidiphtheric Sera: Commercial Variation.*—De Gottrau calls attention to a prescription received from an oculist of Lausanne calling for Roux's Antidiphtheric Serum 10 cc. diluted with physiologic salt solution 100 cc.; the mixture being used for infectious diseases of the eye. His article is to call attention to the fact that the sera pre-

pared in Switzerland (Institute of Bern) are not identical in strength with the Roux sera and he gives the proportion of Swiss sera he used—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912) No. 1, 11 H. V. A.

3. *Plants of Dioscorides: Comparison with Modern Specimens.*—E. Emmanuel, after describing the various manuscripts of Dioscorides, the earliest printed editions of the works of the founder of materia medica and the most comprehensive modern translations, mentions the "Codex Constantinopolitanus" of A. D. 512 as the oldest and in some respects the finest of the manuscripts, particularly since it is richly illustrated. An exact replica of this manuscript was published in 1906, in an edition de luxe and the illustrations found therein have been carefully compared with the herbarium of oriental plants owned by M. Boissier of Chambesey, Switzerland. His reports on the botanical origin of the 381 plants pictured in this oldest manuscript of Dioscorides is given in the article in tabulated form along with the previous conclusions of Tschirch as published in the latter's Handbuch der Pharmakognosy.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), Nos. 4 and 5, 45 and 64, H. V. A.

4. *Ants: Medicinal Use.*—Fr. Berger presents an interesting sketch of the history of ants in medicine from ancient times until today, particular reference being made to the present use of ants in "old wives medicine" in primitive districts. The article is accompanied by excellent bibliographical references.—Schweiz. Wschr. f. Chem. u. Pharm. L. (1912) Nos. 4 and 5, 51 and 72, H. V. A.

5. *A False Ipecac from Colombia: Pharmacognostic and Macroscopic Description.*—C. Hartwich reports a new so-called ipecac which contains no alkaloid; hence is useless. It is 0.8 to 1.0 cm. thick, black-brown externally, with yellowish wood. The bark is

thinner than in the true ipecac and is devoid of the characteristic annulae of the official variety while the wood is correspondingly thicker (0.5 cm.) Much of the bark is broken off (likely due to unequal drying) leaving characteristic fissures and in some cases bare wood.

Anatomically, the bark shows first, a thin layer of dark brown cork with flat cells without very thick walls; second, a small phelloderm 1 to 4 cells thick, with thin-walled parenchyma containing amorphous inulin or similar carbohydrate, and also "rosettes" of calcium oxalate; third, inner layer of bark, radially striped sieve tubes, which on longitudinal section show oblique and calloused sieve-plates. These sieve tubes are found only in the inner layer but a short distance from the cambial layer. There are no sclerenchyma in the bark but occasional lignified cells as shown by reference to phloroglucin—HCl reagent.

The wood layer is radial with medullary rays 1 to 2 cells broad and as much as 40 cells long, the cells being lignified, pitted and containing inulin as the only carbohydrate and also calcium oxalate, both in large single crystals and in rosettes.

The wood wedges contain first, normal wood vessels, some as much as 81 microns in diameter and some filled with fungoid growth; second, wood vessels with branched ends; third, occasional tracheids; 4th, some parenchyma containing calcium oxalate "drusen"; fifth and chiefly, much thickened libriform fibres which reagents show are not lignified.

The author has not been able to exactly identify this new false ipecac, but comparison of it with the other so-called ipecacs leads him to the opinion that it comes from a plant of the Malpighiaceae and that it closely resembles an illustration which Guibourt in his "Historie Naturelle des Drouges Simples" (1876) called "Ipecacuanha gris-blanc de Merat." The article closes with a classification of all the known ipecacs including the one just described.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912) No. 7, 93. H. V. A.

29. Amount of Nicotine in the Tobacco Plant.—Chuard and Mellet report an investigation of the nicotine content of tobacco from the sprout in early spring to the defoliated plant in the fall. The results were as follows, the nicotine being expressed in

parts per thousand: 1. Sprouts three weeks old, traces of nicotine in entire sprout. 2. Young plants 7 weeks old (after "repiquinage") leaves 0.324; roots 0.234. 3. Plants 10 weeks old (before topping), leaves 0.447; stems 0.081; roots 1.085. 4. The cut apex from plant 10 weeks old, 0.687. 5. The topped plant 13 weeks old (at beginning of development of "repousse axillaires") leaves 4.989; stems 0.933; root 2.890; small "repousses" 1.490; large "repousses" 1.970. 6. Plants 19 weeks old (just at withering of leaves), leaves 9.202; stems 0.868; roots 2.669; "repousses" 1.568. 7. Withered stalk (after decay of leaves), stems 0.972; roots 1.987; "repousses" 1.283. The above figures refer to the fresh plant and the paper gives another table showing percentage of nicotine in each of the above samples when dried.—Schweiz. Wschr. f. Chem. u. Pharm. L. (1912) No. 31, 470. H. V. A.

30. Structure of Panama Hat Fibers.—The fibers are from the leaves of *Carludovica palmata* and is found on the banks of the Rio Yapacani in Bolivia. Hartwich reports microscopical structure of these fibers illustrating article with four figures.—Schweiz. Wschr. f. Chem. u. Pharm. L. (1912) No. 32, 481. H. V. A.

31. An Exact Centrifuge Sediment Measure.—Dr. C. Strzyzowski describes a new sediment tube made by F. Hugershoff of Leipzig which is calibrated to 1/100 of a cubic centimeter and has metallic cap at base to render it stronger.—Schweiz. Wschr. f. Chem. u. Pharm. L. (1912) No. 33, 497. H. V. A.

Yttrium: The Quantitative Determination of.—C. F. Whittemore and C. James found that Yttrium could be quantitatively separated from sodium by means of ammonium sebacate, the average yield being 0.1578 gm. Y_2O_3 found in place of 0.1575 gm. calculated. It was found that in the presence of potassium, a double precipitation with ammonium sebacate was necessary to effect complete separation of the Yttrium from the potassium.

Oxalic acid in the presence of ammonium chloride effects a perfectly satisfactory separation from iron, aluminum, lithium, and magnesium, the precipitation being carried out in the cold.—J. Am. Chem. Soc., June, 1912, Vol. 34, p. 772. (L. A. B.)

Tellurium: Sulphide of.—In a careful quantitative study of the compound formed

when H_2S is allowed to act on solutions of H_2TeO_3 , W. O. Snelling states that the precipitate formed consists of tellurium and sulphur of one atom of tellurium to two atoms of sulphur, and that the entire quantity of sulphur can be extracted from the precipitate by means of CS_2 , if the solution has been allowed to stand for some time or has been warmed.

Tellurium sulphide (TeS) appears to be formed, but is decomposed at $0^\circ C.$ in about four hours or instantly if heated, as is shown by the fact that only half the sulphur may be extracted by CS_2 at the moment of precipitation, and at a temperature of $0^\circ C.$

The author concludes "that a sulphide of tellurium having the formula of TeS exists; that it is formed by passing hydrogen sulphide gas into a solution of tellurous acid, according to the reaction $2H_2S + H_2TeO_3 = TeS + S + 3H_2O$, and that this compound decomposes at any temperature higher than 0° or in about four hours at that temperature."—*J. Am. Chem. Soc.*, June 1912, Vol. 34, p. 802. L. A. B.

Perchlorates: A Quantitative Determination of.—A. B. Lamb and J. W. Marden (N. Y. Univ.) state that perchlorates may be rapidly and accurately determined by heating the perchlorate in a glass test tube (Jena) fitted with two plugs of asbestos wool, each 15 mm. thick and placed about 45 mm. apart. The tube is clamped in a nearly horizontal position and the sample heated gently at first until the effervescence, due to the escape of oxygen, ceases, after which the chloride is thoroughly fused. The asbestos plugs prevent the loss of chloride by volatilization.

After cooling, the contents of the tube is transferred to a filter and thoroughly washed with warm water, the chloride being determined in the filtrate as silver chloride. The method gave results varying less than 0.02 percent from the calculated values.—*J. Am. Chem. Soc.* June 1912, Vol. 34, p. 812. L. A. B.

Southern Cypress: Oil of the.—Allen. F. Odell gives as the analysis of the oil from the cones of the southern cypress, (*Taxodium distichum*, Rich.) the following values:

Dextro pinene 85 percent, dextro limonene 5 percent, a pseudo terpene alcohol (Sabinol?) 2 percent, carvone 3 percent, a tricyclic sesquiterpene 3 percent, the remainder composed of substances boiling above $275^\circ C.$ No aldehydes were found in the oil.—*J. Am.*

Chem. Soc., June 1912, Vol. 34, p. 824. L. A. B.

Jamaica Camphor: Determination in Leaves, Twigs and Wood.—H. W. Emerson and E. R. Weidlein of the University of Kansas, state as the result of a determination of the Camphor in the leaves, twigs and wood of camphor trees grown in Jamaica, that it is possible to grow camphor to advantage in Jamaica. The leaves were found to be richer in camphor than the twigs or the wood, and they state that very little camphor is lost by the ordinary weather drying of the leaves. The green leaves were found to average 1.32 percent pure camphor: dried leaves=1.569 percent; green twigs=0.58 percent; dried twigs=0.5445 percent; wood=0.61 percent.—*Jour. Ind. and Eng. Chem.*, Jan. 1912, Vol. 4, p. 33. L. A. B.

Carbon Dioxide: Volumetric Determination.—Leon T. Bowser describes a form of apparatus for a volumetric determination of CO_2 . The CO_2 is generated from the sample in a small flask, by means of acid, and distilled over into a strong alkaline solution contained in an absorption tower, containing glass beads. The CO_2 is absorbed in the alkaline solution in the tower and is afterwards titrated by means of standard acid, phenol (phthalein and methyl orange being used as the indicators, and hydroxide being neutralized and the carbonate converted into bicarbonate with phenolphthalein as indicator, the titration is then finished with methyl orange. The advantage of the method lies in the form of apparatus used.—*Jour. Ind. and Eng. Chem.*, March 1912, Vol. 4, p. 203. L. A. B.

Hydrogen Peroxide: History, etc.—Professor C. B. Jordan tells an interesting story of Hydrogen Peroxide, accompanying his paper with charts showing the effect of varying conditions upon the permanency of its solutions and particularly calling attention to the fact that bottles stoppered with cotton seem to conserve the strength of this preparation better than cork-stoppered bottles. The charts demonstrate the necessity of keeping solutions of H_2O_2 from exposure to light. He calls attention to an excess of acid in many commercial samples.—*Proc. Ind. Phar. Assoc.*, 1912, 58-65. E. C. M.

Spiritus Aetheris Nitrosi.—This preparation should never be kept in bulk, but should be immediately placed in one or two ounce con-

tainers, tightly-stoppered and sealed with paraffin or wax, and these kept in a cool, dark repository. The paper is accompanied by a table showing the desirability of the latter method in the preservation of this preparation over the way usually practiced.—C. B. Jordan, Proc. Ind. Phar. Assoc. 1912, 53-54. E. C. M.

Progress in Methods of Physiological Testing.—Prof. C. R. Eckler says that the activity of many drugs cannot be determined by chemical analysis, either because "their chemistry is improperly understood or is of such a nature as not to admit of qualitative methods," and he describes the methods, both qualitative and quantitative, of testing some of such drugs physiologically. He instances digitalis, ergot and Indian Cannabis as being among such drugs as cannot be assayed by chemical means, and describes the methods by which their physiological activity may be determined. For the digitalis series of drugs, including with that drug, strophanthus, convallaria, squill and apocynum, four methods of examination are used in this country: the guinea-pig, cat, twelve-hour frog, and one-hour frog heart method. Ergot is tested by the uterus-test, blood-pressure method on dogs, and the cock's-comb test. Indian Cannabis is tested by comparison of the effects, on several pairs of dogs, of a standardized drug and the drug which is under examination. The dose of the drug to be standardized which produced a certain effect, is compared with that of the standard preparation which was required to produce the same effect, and by comparison of results on several animals conclusions are drawn. He says that the state of affairs concerning physiological methods and standards is somewhat similar to that which existed a number of years ago regarding chemical methods and standards, when every chemist chose his own methods and no uniform system of analysis had been developed. He looks forward to a gradual development of physiological standardization along definite and certain lines, and hopes for the official adoption of physiological methods and standards covering all the important drugs and preparations that cannot be assayed by chemical means.—Proc. Ind. Phar. Assoc. 1912, 65-70. E. C. M.

Asafoetida Tablets: Assay of.—L. Henry Bernegau and George E. E'Ve recommend the following process for assay of assafoetida tablets: A number of tablets corresponding

to about ten grains of asafoetida are powdered and extracted twice with chloroform. The residue, insoluble in chloroform, is moistened with 5 percent hydrochloric acid, some sand is added, and the mixture is evaporated to dryness on a steam-bath. The residue is then extracted three or four times with hot chloroform, the chloroform extracts added to the first two extractions and the united chloroformic extracts evaporated to dryness on a water-bath in a tared flask. The resultant weight multiplied by two, represents about 98 percent of the equivalent of U. S. P. asafoetida in the tablets taken.—Proc. Penn. Phar. Assoc. 1912, p. 305. E. C. M.

Gelatin, Impurities in.—J. G. Roberts remarks that a quite frequent source of impurity in gelatin is the presence of sulphites, which are probably present as the result of the use of sulphur dioxide as a bleaching agent, although it has been claimed by some manufacturers that its presence is necessary as a preservative during the process of manufacture. While sulphites have been found in the majority of samples examined, it is usually there in very small quantities, sometimes only a trace. The term "technical" which is found on many packages is probably placed there because of this impurity. His examination for arsenic developed the fact that in some samples of German manufacture it was detected and therefore he thinks it advisable to test supplies of Gelatin from this source.—Proc. Penn. Phar. Assoc., 1912, pp. 310-312. E. C. M.

Glycerin Determination in Tooth Paste, etc.—Charles E. Vanderkleed and Fritz Heidelberg recommend the following method for the determination of glycerin in tooth-paste:

An amount of the mixture containing about 2 grammes of glycerin was shaken in a centrifuge bottle with 30 cc. of a mixture of 2 parts of absolute alcohol and one part of absolute ether. After all the glycerin had dissolved in this mixture the bottle was centrifuged and the clear solution, containing glycerin, and phenol, soap and essential oils together with traces of chlorides was filtered through paper into a beaker. The extraction with the alcohol-ether mixture was repeated twice and the united solutions and washings were evaporated at a low temperature to a small volume. 20 cc. of water were added to it and the digestion continued on the water-

bath. When the volume had reached about 10 cc. the contents were transferred to a separator, the beaker rinsed repeatedly with water and the glycerin solution, after acidifying with dilute H_2SO_4 , was shaken with about 20 cc. of ether, in this way separating the glycerin from the phenol, soap, and oils. The watery solution was drawn off, the ether washed twice, and the solution and washings evaporated and treated in the same way as the glycerin solution of the process for the determination of glycerin in suppositories before quoted.—Proc. Penn. Phar. Assoc., 1912, p. 308. E. C. M.

Glycerin in suppositories: Determination of—Charles E. Vanderkleed and Fritz Heidlberg recommend the following method, based upon Hohner's bichromate method for the determination of glycerin in suppositories: About half of the suppository (about 2 gm.) is dissolved in a separator with hot water acidified with sulphuric acid and shaken out with ether whereby a separation from the stearic acid is effected. The watery solution is evaporated on a steam-bath to a small volume, 10 cc. water are added and again evaporated to a small volume, thereby effecting a complete separation of the ether. The solution is rinsed into a 250 cc. volumetric flask, cooled, and filled to the mark with water. (In case a preliminary test showed the presence of chloride, it is better, after evaporation, to add a little freshly precipitated silver carbonate, from 0.1 gm. of silver sulphate. Let stand for ten minutes and fill up to the mark.)

Twenty-five cc. of the filtered solution are measured from a pipette into a 250 cc. volumetric flask, 35 cc. of potassium bichromate solution are added, and lastly 25 cc. of strong sulphuric acid are added slowly under constant rotating to avoid ebullition. The flask is then transferred to a boiling water-bath for 20 minutes, cooled, and filled to the mark. In 25 cc. of this solution the excess of bichromate is determined by adding 20 cc. of potassium iodid T. S. and titrating against approximately N/10 $Na_2S_2O_3$, the factor of which toward the potassium bichromate solution has been determined previously. Calculate the amount of potassium bichromate which has been used to oxidize the glycerin to carbon dioxide. One cc. of potassium bichromate is equivalent to 0.01 gm. of glycerin.

The potassium bichromate solution is prepared by dissolving 74.615 gm. re-crystallized potassium bichromate in water, adding 150 cc. sulphuric acid, and diluting with water to 1000 cc. at 20° C.

In order to determine the factor of the sodium thiosulphate toward the potassium bichromate solution it is advantageous to dilute 10 cc. of the latter to 100 cc. and to use 10 cc. of this dilution for the titration.—Proc. Penn. Phar. Assoc., 1912, pp. 307-308. E. C. M.

Arsenic: Antidote for—Mr. Otto Raubheimer suggests that Magma Magnesia N. F. is much better for preparation of arsenical antidote than is the magnesium oxide of the present official formula. He recommends that 300 cc. of milk of magnesia be diluted with 300 cc. of water and this mixture placed in a bottle holding about 1 liter; 40 cc. Liquor Ferri Tersulphatis diluted with 260 cc. of water to be placed in another bottle: When the antidote is required add the iron solution gradually to the magnesia mixture, shake well and the preparation is ready for instant administration. He claims for the preparation the following advantages:

1. The finely suspended magnesium hydroxide in the milk of magnesia forms a smooth and finely divided magma of ferric hydroxide.
2. Such a magma unquestionably has therapeutic advantages in combining more readily with the arsenic.
3. By pouring the iron solution into the diluted milk of magnesia a more voluminous magma will be obtained than by the reverse as directed in the U. S. P.
4. Milk of Magnesia, if properly prepared, is practically free from carbonate, while magnesium oxid always contains some carbonate, except when recently calcined.

In conclusion, he begs pharmacists to keep these two solutions on hand, side by side, ready for immediate use.—Proc. N. Y. Phar. Assoc., 1912, pp. 321-324. E. C. M.

Fluoride Salts: Antidote for—Professor E. H. LaPierre calls attention to the dangers pertaining to the use of Fluorid of Sodium in Roach and Ant Destroyers and to the improper selection of Lime Water as an antidote for cases of poisoning from fluorid salts, and suggests in place of Lime Water to use Milk of Lime.—Proc. Mass. Phar. Assoc., 1912, p. 38. E. C. M.

Klip Buchu: Occurrence in our commerce as an adulterant of Buchu, U. S. P.—Klip Buchu leaves, *Adenandra fragrans*, has been found in quantities of 17 percent in the long buchu of our market, by Prof. William Mansfield, of Columbia University. Klip Buchu grows in the same region as the official buchu and therefore is gathered by the laborers who are employed to gather that drug. It is in such cases as these that the pharmacognosist plays his part. In fact, it is just beginning to be recognized by dealers in drugs that a pharmacognostic examination of drugs of a vegetable origin, whether in the whole or in the powdered form, is absolutely necessary to determine the botanical origin, to guard against the mistakes of collectors and accidental or intentional adulteration.—Proc. N. Y. Phar. Assoc., 1912, pp. 297-303. E. C. M.

Official Preparations: Shall the druggist make or buy them?—Writing upon this subject, Mr. James H. Martin, of Winchester, Ky., divides the preparations for which formulas are given in the pharmacopoeia into thirty-one classes, all of which he asserts can be made to advantage by the druggists, with the exception of Extracts, Fluidextracts, Tinctures of potent drugs and some few of the liquors.—Pros. Kentucky Phar. Assoc., 1912, pp. 119-122. E. C. M.

Sweet Spirit of Nitre.—In order to determine the cause of the trouble connected with the method of manufacture and the storage of this preparation, Dr. Linwood A. Brown made an exhaustive study of this preparation, conducting a series of experiments to determine its permanency as prepared with absolute alcohol and with U. S. P. alcohol, and as kept under varying conditions, and concludes that, from the result of these experiments, it is demonstrated that absolute alcohol should be used in its preparation, and that it should be stored in small containers protected from the light.—Proc. Kentucky Phar. Assoc., 1912, pp. 134-136. E. C. M.

Oil of Peppermint: Influence by Cultivation.—This is article No. 7 by the Committee of the Austrian government for the increased cultivation of medicinal plants, which articles have since been published in book form: "Ueber Kulturversuche mit Arzneipflanzen in Korneuburg," by Prof. Dr. W. Mitlacher.

The peppermint herb was cultivated under various conditions, the second highest yields being obtained with fertilizers of manure and saltpeter, and the highest with manure, saltpeter, superphosphate and potash salt, which herb also yielded the highest percentage (0.95) of volatile oil. Dr. Gustav Mossler, of the chemical-pharmaceutical laboratory of the University of Vienna, made a complete analysis of the different oils, which he tabulated and which should be consulted in the original article.—Ph. Post, 1912, No. 1, 2-5. O. R.

Tablets: Their Manufacture by the Pharmacist.—Magister Jos. Hoyer, apotheker in St. Valentin, deplors the fact that the pharmacist is flooded with tablets prepared by factories and suggests a remedy, namely, the manufacture of these tablets by the pharmacist himself. From his own practical experience the author writes a series of articles on the technique of tablet making.—Ph. Post, 1912, No. 2, 4, 6, 10, 12. O. R.

Formulas for Foreign Specialties.—As an answer to numerous queries as to the composition of proprietary preparations, formulas are given for: Aniodol, Antikamnia, Beecham's Pills, Beecham's Glycerin and Cucumber, Pilules savonneuses de Boissy, Boricine Meisssonier, Bromidi, Bromo Seltzer, Vinaigre de Bully, Cachets Faivre, Calvert's Carbolic Tooth Powder, Cascarine Leprince, Chlorodyne Browne, Coaltar Saponné Le Boeuf, Colchi-Sal Midy, Creme Girard, Creme Simon, Diadermin, Eau de Bôtot viritable, Eau des Jacobins, Eau dentifrice du Dr. Pierre, Eau précieuse Dépensier, Elixir dentifrice des Bénédictins de Toulac, Elixir Grez, Elixir Nyrdahl, Euptnine Vernade, Foster's Salbe, Gouttes livoniennes Trouette, Grains de Val, Granules des Vosges, Grayon Gyrol, Hazeline-Cream, Histogénol Naline, Listerine, Lotion Deguéant, Vin Coca Mariani, Pilules Orientales, Panguadine, Pesquis Uran-Wein, Pierre des Fakirs, Pink Pills, Poncelet's Hustenpastillen, Potion du Chartreux, Poudre Decock, Purgetyl Détry, Purgul Koehly, Racahout des Arabes Delangrenier, Scavuline, Sirop Delabarre, Sirop Deschiens, Sirop Famel, Sirop Rami, Solution Pautauberge, Thaolaxine, Thé Chambard, Verne's Boldo-Elixir, Pastilles Valda, Vin de Vial.—Ph. Post, 1912, No. 2, 16, from Zblatt Pharm. O. R.

Pharmacopoea Austriaca VIII: Comments.

—The following comments are submitted by the scientific laboratory of G. Hell & Co.:

Aluminum Aceticum Solutum (Lig. Alumin Subacet.) A comparison is made between the preparation of the seventh and eighth edition and the conclusion is reached that the specific gravity should be 1.0375 instead of 1.046.

Chininum Tannicum. The solubility statement in 800 parts of cold water and in 30 parts of hot water is questioned.

Extractum Belladonnae Foliorum. The prescribed alkaloidal content=2 percent is too high, as belladonna leaves containing 0.03 percent alkaloid yield an extract with an alkaloidal content of 1.6 percent.

Extractum Chinae frig. parat. siccum. The alkaloid content of this dry extract of cinchona, prepared by cold percolation, is about 20 percent and *not* 7.5 percent.

Extractum Dulcamarae Siccum. While all other dry extracts are diluted with acacia so that 2 parts of the dry extract represent 1 part of the pilular extract, Ph. Aust. VIII orders equal parts to be evaporated to dryness with the result that 1.7 parts of the dry extract represents 1 part of the pilular extract.

Extractum Hamamelidis fluidum. The required dry residue of 23 percent is too high and 17-20 percent is more correct, especially as the leaves should yield 20 percent of extract. For the determination of the extract of this and other drugs it would be well to use alcohol of the same strength as employed in the preparation of the respective galenicals.

Extractum Liquiritiae. All other aqueous extracts are purified by precipitating the albuminous and mucilaginous substances with alcohol, and this should also be done in this extract.

Extractum Strychni. Extract of *nux vomica* is ordered to be prepared with diluted alcohol (68%) according to the general process given under extract of belladonna leaves, which, however, also dissolves the 4 percent of fat in *nux vomica*. After distilling off the alcohol this objectionable fat remains in the aqueous extract and causes same to deteriorate. This fat can be removed partly by means of paraffin or completely by extraction with petroleum ether. The alkaloid content of extract of *nux vomica* might be increased from 16 to 18 percent.

Solutions of Narcotic Extracts. Solutions of 10 parts of narcotic extract, 6 parts of water, 3 parts of glycerin and 1 part of alcohol, may be kept ready for dispensing. But this menstruum is unsuitable for extract of squill and Indian Cannabis.

Detection of Copper, Tin, Lead, etc., in the Ash of Extracts. The Austrian Pharmacopoeia orders these metals to be detected by the addition of H₂S water or T. S. to the HCl solution of the ash. But in the presence of iron oxide in the ash, as f. i., in Extract of Iron Malato, the H₂S water, especially when not fresh, will be oxidized and sulphur will be precipitated. In this case, as well as in general, it is best to use freshly generated H₂S gas.

Extractum and Tinctura Malatis Ferri. Several analysts have reported that when the calcined ash is treated with nitric acid or a nitrate in order to completely oxidize the carbon, ferrous oxide or iron and is then dissolved in HCl, free chlorine will be evolved; but they have failed to give an explanation except that this is due to a trace of nitric acid left in the ash. As it has been found in the laboratory of Hell & Co. that free chlorine will also be evolved even when no oxidizing agent is employed, the cause of this was traced to the manganese content of the iron, as apples are free from it. By the calcination of the ash MnO is oxidized to Mn₂O₃, which acts the same as MnO₂, reducing HCl to free Cl even at a temperature of 60° C. It is recommended to heat the HCl solution of the ash, so as to drive off the free Cl, and then determine the iron content iodometrically. By taking this precaution uniform results are obtained.

Ferr. hydrooxydat. dialysat. solut. It is shown that a great many dialyzed iron preparations in the market contain less than 3.5 percent of Fe and more than 0.239 percent of HCl or 0.378 percent of FeCl₃, as required by Pharm. Austr.

Hydrarg. Chloratum mite. When testing for HgCl₂ in calomel it is essential to use filter paper which is entirely free from Cl. It is recommended that such filter paper should be specified and should be included among the list of reagents, etc.

Natrium Chloratum. The flame test for potassium in sodium chloride is unreliable, quite especially as a great deal of blue glass is

not suitable and gives fallacious results. The authors recommend Koevenagel's reagent of Cobalt-sodium-hexanitrite, which produces a yellow precipitate in potassium solutions even as dilute as 1:2000. If 1 percent KCl is permissible in the official NaCl, then no precipitate will be produced in a 5 percent solution of sodium chloride.

Tincturae. The percentage of dry residue serves as the valuation of a great many tinctures, but is expressed as "*for the menstruum*" and not as in the *finished tincture*. That, therefore, the figures are too high can be seen in Tincture Benzoes, which should contain 18 percent of dry residue. Benzoin should contain 90 percent of alcohol soluble resin. The tincture is prepared by macerating 20 parts=18 parts soluble resin, with 100 parts of alcohol. As 118 parts of the finished tincture contain 18 parts of dry residue, therefore the percentage is only 15.25 and not 18.

Tinctura Strophanti. The seventh edition ordered the seed to be deoleated with ether, which, on account of also dissolving some strophantin, was changed to petroleum ether. The tincture was prepared with 90 percent alcohol. The eighth edition orders the bruised seed to be percolated with diluted (68%) alcohol into a 10 percent tincture. This preparation is unsatisfactory, as oil drops separate, gets turbid in cold weather and does not mix clear with water. The authors recommend that the drug should be standardized and that the tincture should be prepared from deoleated seed. (Such a tincture is also better tolerated by a weak stomach, not causing nausea.—O. R.)—Ph. Post, 1912, No. 4, 37-41. O. R.

Sal Karolinum Factitium: Legality of Name.—The City of Carlsbad petitioned that this name be deleted from the Hungarian Pharmacopoeia, on account of being a trademark infringement. It was further suggested to change the title to *Sal factitium typi salis Karolini*. The Hungarian health board, however, decided that the present title shall be retained, as it is well known to physicians and the public, and that the designation "artificial" cannot cause any misrepresentation or confusion, and is therefore no infringement on the rights of the city of Carlsbad and its "natural" salt.—Ph. Post, 1912, No. 5, 55. O. R.

The Pharmacist and the Law

ABSTRACT OF LEGAL DECISIONS.

REGISTERED PHARMACISTS—HYDROGEN PEROXIDE NOT A MEDICINE.—The conviction of the manager of a 5 and 10 cent store on a charge of dispensing and compounding medicines or poisons, namely, western peroxide or hydrogen peroxide, not being a registered pharmacist, brought up the question whether hydrogen peroxide is a medicine. It was held that technically it was a medicine, like many other articles found in grocery stores and paint shops and in the same way as alcoholic preparations for external use, water, zinc, tar, turpentine, copper, olive oil, lemon essence, resin, tooth washes, soda, some soaps, or bay rum and glycerin for the hands. Hydrogen peroxide was not claimed to be a poison, and was shown to have no medical effect when taken into the stomach, but is simply a detergent, a cleanser, and as a medical agent it was shown to be used only to cleanse and soothe the skin, to dissolve and remove impurities from wounds and ulcers, or from the mouth, teeth and ears. It is not generally or popularly known as a medicine, and therefore the sale of it was held not to be regulated by the statute under which the conviction was obtained. A dissenting opinion was to the effect that it had been shown that it is more than a preventative or detergent, as it is frequently prescribed and used as a curative agency, and that its primary and principal use is medicinal; and that it is so regarded by the state board of pharmacy.

It was also held that the word "store" as used in the first sentence of the statute means a store of the same kind or class as a pharmacy, and does not apply to a 5 and 10 cent store.

State v. Hanchette, Kansas Supreme Court, 129 Pac. 1184.

UNFAIR COMPETITION—IMITATION IN PACKAGES AND COLOR OF PRODUCT.—The Coca-Cola Company, in a suit in equity, sought protection against what it claimed to be unfair competition on the part of the