

COMMITTEE REPORTS

REPORT OF THE COMMITTEE ON DRUG MARKET.*

(Continued from p. 549, July issue.)

CARAMEL: Of the ten samples examined only four were found to be of N. F. quality. One of the samples was distinctly granular even when spread in a thin layer. As the N. F. requires caramel to be homogeneous it was considered that the granular condition is undesirable, particularly, as it has a tendency to increase with the separation of a thin liquid portion and to occasionally become sour upon keeping. Another sample yielded a precipitate when subjected to the phosphoric acid test, and one had a slight alkaline reaction and taste. Three samples were a little low in specific gravity.

Reported by J. G. ROBERTS.

CASCARA SAGRADA: One lot contained considerable *Rhamnus Californicus*.

Reported by G. A. SLOTHOWER.

CATECHU: The three lots examined assayed 65.6%, 73.6%, and 74.8% alcohol-soluble matter, respectively. The U. S. P. requires not less than 60%. Reported by F. J. KEENAN.

CINCHONA, YELLOW: One lot was *Cinchona pallida* and not the official *Cinchona calisaya*. It contained only 2.37% alkaloids.

Reported by G. A. SLOTHOWER.

COLCHICUM ROOT: Two lots yielded .44% and .58%, respectively, of colchicine.

Reported by J. G. ROBERTS.

COLCHICUM SEED: As usual, all of the colchicum seed was of high quality as 0.75% and 0.58% of colchicine was found in two lots.

Reported by J. G. ROBERTS.

CRESOL: An excess of hydrocarbon rendered one lot of undesirable quality.

Reported by J. G. ROBERTS.

CUDBEAR: Cudbear varies greatly in ash content. The six lots examined yielded 3.34%, 6.18%, 12.14%, 22.9%, 37.4%, and 36.7% ash, respectively. The N. F. maximum limit is 35%.

Reported by GEO. E. ÉWE.

ELDER FLOWERS: The difficulty in cleaning such substances as elder flowers is illustrated in one lot which originally yielded 10.04% ash, but which after two attempts at depriving it of earthy matter still yielded 9.46% of ash. The first cleaning reduced the ash yield only 0.2%.

Reported by J. G. ROBERTS.

GENTIAN: Several lots were excessively moist and were rejected.

Reported by GEO. E. ÉWE.

GLUCOSE: Recent shipments of glucose have been of particularly fine quality, as they had only a slight yellowish color and comply with all the U. S. P. requirements.

Reported by J. G. ROBERTS.

GUAIAIC: The nine lots examined assayed 95.4%, 85.7%, 76.4%, 75.9%, 70.8%, 74.9%, 95.3%, 91.7% and 83.9% alcohol-soluble matter, respectively. The U. S. P. requires not less than 85%.

Reported by GEO. E. ÉWE.

HELLEBORE, WHITE, JAPANESE: Sample contained 2.84% alkaloid which is more than was found in any previous sample. The largest amount heretofore found was 1.75%. Available literature states that the alkaloidal content of hellebore ranges from .4% to 1.5%.

Reported by J. G. ROBERTS.

HYDRANGEA: One lot contained an excessive amount of stems.

Reported by GEO. E. ÉWE.

HYOSCYAMUS: One bale, of a two-bale consignment, consisted of a mixture of approximately equal parts by weight of Hyoscyamus and Belladonna Leaves. The mixture of the two leaves was not indiscriminate; the belladonna leaves appearing to form the core of the bale.

Reported by GEO. E. ÉWE.

IPECAC ROOT: A broker's sample contained only 1.1% ether-soluble alkaloids and yielded 5.8% ash. It was, therefore, 85% low in alkaloid and 1.3% high in ash.

Reported by J. G. ROBERTS.

*Pennsylvania Pharmaceutical Association, Philadelphia, June 1921.

IRON LACTATE: One lot contained only 87.2% crystallized iron lactate. The N. F. standard is 97%.
Reported by F. J. KEENAN.

KAMALA: The previous extensive adulteration of kamala with sandy material appears to have been discontinued as we found only 11.7% of ash in the one lot examined. Previous samples have contained as high as 57% sandy material. Quoting from "Squires Companion" to the "British Pharmacopoeia" we find the following ash limits: Austrian and Hungarian 10%; German, Italian, Japanese, Russian, Swedish and Swiss 6%; and Portuguese 8%. Squires also states that pure kamala yields only 1.37% ash. *Service and Regulatory Announcements* No. 19 issued by the U. S. Government permits not more than 8%.

The results obtained with the acid-insoluble ash test proved the presence of foreign matter, as the amount found in pure kamala is negligible, whereas this lot yielded 9%. While it was considered that the ash content of this lot was higher than necessary it may be possible that a better product is not commercially obtainable as since 1911, when we found 2.57%, no sample has yielded less than 21.7% ash.
Reported by J. G. ROBERTS.

KINO: The three lots examined assayed 28.6%, 44.6%, and 50.2% alcohol-soluble matter, respectively. The U. S. P. standard is "not less than 45%." Reported by K. SUTO.

KIESELGUHR: Three lots lost, respectively, 15.2%, 12.1%, and 12.4% of their weight upon ignition.
Reported by F. GLOOR.

LICORICE EXTRACT, STICKS: A small percentage of the sticks, of a lot of stick extract licorice, contained a core of soft extract surrounded by a brittle coating of extract. Evidently a defect in manufacture and not an intended adulteration. Reported by GEO. E. EWING.

LIQUOR FORMALDEHYDE: Deterioration in the quality of this substance was noted as four of the thirteen lots examined were of undesirable quality. Two lots contained considerable paraformaldehyde, which would not remain in solution even at ordinary temperature. One lot was distinctly dirty and another had a yellow color.
Reported by J. G. ROBERTS.

LUPULIN: One lot was not acceptable on account of its pronounced valerian-like odor, which the N. F. states renders it unfit for use.
Reported by J. G. ROBERTS.

LUPULIN: One lot assayed 44.75% ether-soluble matter and 25.2% ash, respectively, whereas the N. F. requires not less than 60% ether-soluble matter and not more than 16% ash.
Reported by F. GLOOR.

MAGNESIUM OXIDE, TECHNICAL: Sample contained 3.98% calcium oxide; was about 11.1% low in strength; contained an excess of carbonate and lost 23% of its weight upon ignition.
Reported by J. G. ROBERTS.

MARSHMALLOW ROOT: One lot contained excess periderm and when used in the manufacture of fluidextract a product was obtained which was so much darker than usual as to be unmarketable.
Reported by F. GLOOR.

MYRRH: The fourteen lots examined assayed 20.9%, 32.9%, 38.3%, 33.0%, 31.4%, 18.7%, 27.1%, 29.4%, 30.9%, 32.2%, 31.5%, 34.7%, 42.9% and 35.9% alcohol-soluble matter, respectively. The U. S. P. standard is not less than 35%. Reported by F. J. KEENAN.

NUX VOMICA, POWDERED: A 2000-pound lot contained only 2.36% of alkaloids which is 0.14% below the U. S. P. requirement. A frequent cause for the prevalence of low strength nux vomica is due to the fact that it is not powdered sufficiently fine for assay. However, as this lot was received in a finely powdered state it is evident that it did not contain sufficient alkaloids.
Reported by J. G. ROBERTS.

OIL OF BIRCH: Three lots that failed to yield positive results when subjected to identity tests were considered of suspicious quality and were, therefore, rejected.
Reported by J. G. ROBERTS.

OIL OF COCOANUT: Complaints have been received regarding both the rancid odor and the lack of odor of this oil. A really rancid odor is of course an indication of inferiority, but samples having little or none of the characteristic odor are found to be of good quality.
Reported by J. G. ROBERTS.

OIL OF OLIVE: A broker's sample was rejected because of its high acid number.
Reported by J. G. ROBERTS.

OLEORESIN, MALE FERN: A sample, marked as containing 24% to 25% filicin, was found to contain only 17% crude filicin and was therefore rejected. Reported by J. G. ROBERTS.

PAPAN: The seven lots examined assayed 1.25%, 1.27%, 1.7%, 1.25%, 1.26%, 1.12%, 1.14%, respectively, in digestive power.

Reported by K. SUTO.

PETROLATUM-LIQUID: All of the twelve samples tested were of satisfactory medicinal quality. One sample was particularly good, as it contained only a mere trace of carbonizable impurities. The viscosity of most of the samples could not be determined by the U. S. P. method, as that method is not applicable to the heavy medicinal oils now on the market. A new method should be given, if the viscosity test is to be retained in the U. S. P.

Reported by J. G. ROBERTS.

PODOPHYLLUM: A lot was divided into roots and rhizomes and found to consist of 29.7% roots and 70.3% rhizomes. The roots were found to contain 13% more resin than the rhizomes, therefore it is likely that a large proportion of root in podophyllum is not objectionable.

Reported by GEO. E. ÉWÉ.

QUINCE SEED: An examination of one lot showed it to contain about 50% of very dark brown, almost black, seeds. They produced an inferior mucilage, both in color and viscosity. As good quality seeds have a light, reddish brown color this lot was considered of unsuitable quality.

Reported by J. G. ROBERTS.

RED GUM, POWDERED: Four lots yielded 2.63%, 73.6%, 81.3%, and 97.1% of water-soluble matter, respectively. The first mentioned lot evidently had been previously extracted.

Reported by F. GLOOR.

RED ROSE LEAVES: Two lots yielded, respectively, 4.12% and 4.59% ash, and, therefore, slightly exceeded the U. S. P. ash limit of 3.5%.

Reported by G. A. SLOTHOWER.

RHUBARB, CHINESE: One lot was so recent as to be moist and fleshy.

Reported by G. A. SLOTHOWER.

ROSEMARY LEAVES: One bag, of a large consignment, consisted of red rose leaves.

Reported by G. A. SLOTHOWER.

SARSAPARILLA: Numerous lots of sarsaparilla are offered from which the knotty crowns have not been removed.

Reported by F. J. KEENAN.

STYRAX: The following results were obtained in one lot: Ash, 2.82%. Residue insoluble in hot alcohol, 4.79%. Acid number, 85.0. Saponification number, 194.2. Free and combined cinnamic acid, 14.09%.

Sample complies with the U. S. P. requirements, except that it contains 2.29% excess of matter insoluble in hot alcohol, and yields 1.82% excess of ash. Although the U. S. P. does not state the amount of cinnamic acid that should be present in storax, we consider it an important factor and, therefore, determined the amount of free and combined cinnamic acid present according to Umney's method, as published in the November 1912 number of the *Perfumery and Essential Oil Record*. In this method, the storax is first purified and then used for the determination. The amount found to be present in the purified storax is lower than Umney's standard, which we quote as follows:

"Based upon such method we are of opinion that the minimum which we had"—previously—"put of 15% might well be raised to 20%."

Although sample contained less than Umney's revised standard of 20% cinnamic acid, it is the best that we have found on the market.

Reported by J. G. ROBERTS.

TEREBENE: One lot yielded 75% distillate below 160° C. The U. S. P. states that terebene boils between 160° C.-172° C.

Reported by K. SUTO.

SKUNK CABBAGE: One lot was badly worm-eaten.

Reported by GEO. E. ÉWÉ.

SODIUM CACODYLATE: One lot required 4 Cc. tenth normal potassium hydroxide volumetric solution whereas the U. S. P. states that not more than 0.5 Cc. is necessary.

Reported by GEO. E. ÉWÉ.

UVA URSI: One lot contained 12.5% of stems. The U. S. P. limit of stems and other foreign matter is not more than 5%.

Reported by GEO. E. ÉWÉ.

VALERIAN: One lot offered as such possessed the odor, taste, and appearance of valerian but was not valerian, as it was inulin-bearing and, probably, belonged to the *Compositae*, whereas valerian is starch-bearing and belongs to the *valerianacea* family.

Reported by GEO. A. SLOTHOWER.

WILD LETTUCE: Twenty-five percent of one lot was infected with mold.

Reported by GEO. A. SLOTHOWER.

WORMSEED, RUSSIAN: A six-bag lot was rejected because it contained only a trace of santonin. The "National Standard Dispensatory" states that wormseed should contain 2.5% to 3.5% of santonin, but that the commercial article rarely yields more than 2%. According to an abstract in the PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, Vol. 34, p. 413, Flückiger found that the flowered plants, collected in September, contained no santonin. This fact may account for the absence of santonin in this lot. Reported by J. G. ROBERTS.

The following table shows the results of 217 crude drug assays made in the Analytical Laboratory of the H. K. Mulford Co. during the year June 1, 1920 to June 1, 1921:

Drug.	Number of samples.	Lowest assay.		Highest assay.		Average.	Standard.		No. Standard.	
		%.	%.	%.	%.				Above.	Below.
Aconite leaves	3	0.19	0.27	0.23	0.2%	alkaloids		2	1	
Aconite root	17	0.21	0.68	0.39	0.5%	alkaloids		3	14	
Belladonna leaves	10	0.26	0.75	0.48	0.3%	alkaloids		10	0	
Belladonna root	3	0.43	0.62	0.54	0.45%	alkaloids		2	1	
Cantharides Chinese	5	0.64	1.75	1.20	0.6%	cantharidin		5	0	
Cinchona red	24	1.63	12.01	7.71	5%	alkaloids		22	2	
Cinchona yellow	8	5.54	12.32	8.19	5%	alkaloids		8	0	
Coca leaves	2	0.49	1.18	0.83	0.5%	alkaloids		1	1	
Colchicum Seed	17	0.48	0.81	0.60	0.45%	colchicine		17	0	
Conium Seed	3	0.29	0.56	0.39	0.5%	coniine		1	2	
Cubebs	1	12.4	12.4	12.4	10%	vol.-ether-ext.		1	0	
Gelsemium	1	0.52	0.52	0.52	0.4%	alkaloids		1	0	
Ginger, Jamaica	15	2.50	5.22	4.03	2%	non-vol.-ether-ext.		15	0	
Guarana	2	4.62	5.57	5.09	4%	caffeine		2	0	
Hydrastis	7	2.74	3.97	3.06	2.5%	alkaloids		7	0	
Hyoscyamus	11	0.058	0.102	0.077	0.065%	alkaloids		10	1	
Ignatia	3	2.53	3.55	3.19	2%	alkaloids		3	0	
Ipecac	7	2.00	2.99	2.39	1.75%	alkaloids		7	0	
Jalap	13	4.89	32.06	13.41	7 Gm.	total resin		11	2	
Kola Nuts	14	1.10	2.37	1.64	1.5%	caffeine		12	2	
Lobelia	6	0.37	0.64	0.52	0.5%	alkaloids		3	3	
Mandrake	6	3.30	5.95	4.63	3%	resin		6	0	
Nux Vomica	13	2.04	2.82	2.51	2.5%	alkaloids		7	6	
Physostigma	8	0.13	0.35	0.20	0.15%	alkaloids		6	2	
Pilocarpus	1	1.16	1.16	1.16	0.6%	alkaloids		1	0	
Quebracho	3	1.06	1.36	1.20	1%	alkaloids		3	0	
Sanguinaria	6	3.41	5.21	3.78	2.5%	alkaloids		6	0	
Stramonium leaves	7	0.32	0.64	0.50	0.25%	alkaloids		7	0	
Veratrum Viride	1	0.99	0.99	0.99	1%	alkaloids		0	1	
Totals	217							179	38	

COMPARISON WITH REPORTS PREVIOUSLY SUBMITTED.

Year.	Report	Total.	Above.	Below.	Percent above.
1909	Report	395	313	83	79.3
1910	Report	340	291	49	85.6
1911	Report	263	224	39	85.1
1912	Report	298	235	63	78.8
1913	Report	382	264	118	69.1
1914	Report	286	221	65	77.2
1915	Report	133	98	35	73.6
1916	Report	215	156	58	72.9
1917	Report	172	147	25	85.3
1918	Report	131	113	18	86.8
1919	Report	206	173	33	83.9
1920	Report	211	173	38	81.9
1921	Report	217	179	38	82.4

Last year only aconite root and colchicum corm were the drugs one-half or more of which ran below standard. This year aconite root is still in the deficient list, in addition to conium seed, lobelia and veratrum viride. Nux Vomica also deserves an unfavorable rating.

Reported by GEO. E. ÉWE.

(Signed) *Committee:* { CHARLES H. LAWALL,
CHARLES E. KRAMER,
GEORGE E. ÉWE,
JOHN G. ROBERTS,
Chairman.

CORRESPONDENCE

HOSPITAL PHARMACISTS IN THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The Editor, JOURNAL OF THE A. PH. A.

As a Hospital Pharmacist of many years' standing I would trespass upon your valuable space to say a few things about the proposed organization of a group of hospital pharmacists within the Association, the aim of such a group being to interest them in the work of the Association, which in itself is a very important one, as a study of your JOURNAL shows every month, and really it does not seem possible for a hospital pharmacist to keep up to date without its aid, so I would advise every young pharmacist to become a member of the A. Ph. A. and absorb knowledge for future days; also every old pharmacist should at once become a member, so he does not die before doing what he should have done years ago.

Hospital pharmacists are naturally much interested in pharmacy and medicine; they are 100 percent professional men and have no side lines to distract their attention. By the nature of their calling they have to keep well posted and up to date on everything concerning their work, and as the commercial end is immaterial to them, their energies and mind are always bent upon improving and increasing the importance of the pharmacy departments in the hospitals. Their eyes look upwards and they long to accomplish things which, while adding further dignity to their already valuable services, will make them still more helpful to the physicians with whom they are daily in contact in their war upon disease and suffering.

The proposed movement for organizing Hospital Pharmacists is neither offensive nor defensive, but merely a constructive idea of the highest importance, which if successfully carried out will, I firmly believe, have far-reaching results in the future and place our whole profession upon higher and broader planes, also call into our ranks intellects of the highest order. So every pharmacist should take a wholehearted interest in this movement and help make it the success it deserves to be, and I suggest as a starter in the right direction that every member of the A. Ph. A. do some canvassing among his brother pharmacists, especially those practicing in hospitals, and have them send for information about this movement to William B. Day, General Secretary A. Ph. A., Chicago, also ask for a membership blank and send that \$5.00, and get where they belong.

AUGUST 11, 1921.

(Signed) EDWARD SWALLOW,
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