consist of three regularly-elected or appointed delegates from the several state pharmaceutical associations and from associations of a similar character regularly organized in the several territorial and insular possessions of the United States, provided such delegates are members of the American Pharmaceutical Association at the time their credentials are signed."

It will, probably, be desirable to have it understood and stated in the By-Laws that any action of the House of Delegates will be an expression of the sense of the assembled delegates of the state associations, also that the House of Delegates may appoint committees to execute its orders, but that no action of the House of Delegates will be binding upon the A. Ph. A., unless endorsed by the Council.

Messrs. F. H. Freericks, Joseph L. Lemberger, W. C. Anderson and F. M. Apple, members of the Committee appointed, with myself, at Detroit, "to investigate the House of Delegates and see if its usefulness could not be improved," are especially requested to make comment upon the subject in hand and communicate these comments to the other members of the Committee, including the chairman. Members of the House of Delegates and officers and members of the American Pharmaceutical Association are requested to make comments and communicate them to the chairman and other members of the Committee, either directly or through the Pharmaceutical Press. The editors of the Pharmaceutical Press are urgently requested to study the subject and take part in this discussion.

THE PERCENTAGE OF MOISTURE LOST IN THE PREPARATION OF SOME OFFICIAL AND UNOFFICIAL DRUGS.*

EDWIN L. NEWCOMB, P. D.

The following compilation of data, concerning the moisture lost in the drying of vegetable drugs, has been prepared from the record of student work in Pharmacognosy at the University of Minnesota. The drugs were collected during the first few weeks of each college year (September and October). Where washing was necessary to remove adhering soil, care was taken to remove all wash water before weighing the fresh drug. All drugs were dried at a temperature of about 80° C., except where otherwise stated. The drying was continued where artificial heat was employed, until all but two to four *per cent.* of the water was removed. A battery of five iron double-walled, gas-heated ovens were utilized for this purpose (v. 84, pp. 201-214, American Journal of Pharmacy). "Room temperature," as used in this paper, means from 68° to 70° F. This temperature was maintained by automatic thermostat controls.

	Percentage of Moisture
Belladonna Folia:—	
(a) 1913 Crop, leaves and tops not over 7 mm. dia., with flowers and numerous berries. (Average *percentage* of moisture lost in 30 samples)	71.00
(b) 1914 Crop, leaves only	82.00
Belladonna Radix:—	
(a) 1913 Crop. (Average of 29 samples)	75.00
(b) 1914 Crop. (Average of 2 samples)	73.6

* Presented to the Scientific Section, Minn. State Pharm. Assoc., St. Paul, Feb. 10, 1915.

	Percentage of Moisture
Stramonium, (Datura Stramonium):—	
(a) 1913 Crop, leaves and flowering tops with stems not over 7 mm. in dia	65.3
(b) 1914 Crop, leaves alone	83.00
(a) Average of 24 samples.	
(b) Average of 30 samples.	
Datura Tatula, (Stramonium, U. S. P. IX):—	
(a) 1913 Crop, leaves and flowering tops with stems not over 7 mm. in dia. (Average of 19 samples)	65.7
(b) 1914 Crop, leaves only. (Average of 48 samples)	82.7
Datura Laevis:—	
(a) 1913 Crop, leaves and flowering tops with stems not over 7 mm in dia. (Average of 17 samples)	72.00
(b) 1914 Crop, leaves only. (Average of 8 samples)	82.87
Datura Metelloides:—	
(a) 1913 Crop, leaves and flowering tops with stems not over 7 mm. in dia. (Average of 15 samples)	72.5
(b) 1914 Crop, leaves only. (Average of 28 samples)	83.00
Datura fastuosa coerulea:—	
(a) 1913 Crop, leaves and flowering tops with stems not over 7 mm. in dia. (Average of 30 samples)	73.4
(b) 1914 Crop, leaves only. (Average of 9 samples)	81.00
Datura atroviolaceae:—	
1914 Crop, leaves only. (Average of 19 samples)	82.00
Datura fastuosa flava:—	
1914 Crop, leaves only. (Average of 7 samples)	81.00
Datura fastusosa alba:—	
1914 Crop, leaves only. (Average of 27 samples)	81.2
Digitalis purpurea:—	
Leaves of first year's growth. Cleaned from adhering soil and dried quickly at 80 to 100 degrees Cent.	
(a) 1913 Crop. (Average of 95 samples)	80.9
(b) 1913 Crop. (Average of 62 samples)	81.6
(c) 1914 Crop. (Average of 28 samples)	80.3
(d) 1914 Crop. (Average of 51 samples)	81.74
Digitalis grandiflora:—	
Leaves of the first year's growth, prepared the same as D. purpurea. (Average of 21 samples, 1913 crop)	79.4
Digitalis lutea:—	
Leaves of the first year's growth, prepared the same as D. purpurea.	
(a) 1913 Crop. (Average of 21 samples)	80.5
(b) 1914 Crop. (Average of 4 samples)	81.00
Digitalis lanata:—	
Leaves of the first year's growth, prepared the same as D. purpurea. 1913 Crop. (Average of 7 samples)	81.1
Digitalis ferruginea:—	
Leaves of the first year's growth, prepared the same as D. purpurea. 1913 Crop. (Average of 14 samples)	78.6
Salvia sclarea:—	
Leaves of the first year's growth, cleaned from adhering soil and dried at room temperature. (Average of 15 samples.) 1913 Crop	81.4
Verbascum phlomoides:—	
Leaves of the first year's growth, prepared like Digitalis. (Average of 29 samples.) 1913 Crop	81.8

	Percentage of Moisture
Althaea officinalis:—	
Leaves of the first year's growth, cleaned and dried at room temperature. (Average of 22 samples.) 1913 Crop	66.8
Symphytum officinale and S. asperrium:—	
Leaves of the first year's growth, prepared the same as D. purpurea. (Average of 22 samples.) 1913 Crop	81.4
Mentha Piperita:—	
(a) Leaves and tops not over 10 cm. in length, cleaned and dried at room temperature. 1913 Crop, average of 51 samples (Humidity was high during the drying.)	73.5
(b) 1914 Crop, dried same as above, average of 51 samples (Humidity was low during the drying.)	80.00
Salvia:—	
(a) Leaves and tops not over 10 cm. in length, cleaned and dried at room temperature. 1913 Crop, average of 49 samples	70.4
(b) Leaves only, cleaned and dried at room temperature. 1914 Crop, average of 9 samples	73.2
Marrubium:—	
(a) Leaves and tops not over 10 cm. in length, cleaned and dried at room temperature. 1913 Crop, average of 20 samples	67.6
(b) Leaves only, 1914 crop, dried as above, average of 9 samples	74.00
Humulus:—	
(a) Strobiles dried at room temperature, 1913 crop, average of 17 samples	71.7
(b) Strobiles dried at room temperature, 1914 crop, average of 25 samples	76.8
Cannabis sativa:—	
(a) Pistillate tops dried at room temperature, sample contained many seed, average of 27 samples	69.2
(b) 1914 Crop, prepared as above, also containing some seed, average of 24 samples	69.7
(c) Pistillate tops collected from wild growing plants, with very few seeds present. Average of 6 samples	70.7
Ruta:—	
(a) Leaves and tops not over 10 cm. in length, 1913 crop, dried at room temperature, average of 14 samples	72.7
(b) Leaves only, 1914 crop, dried at room temperature, average of 6 samples	76.1
Valeriana:—	
(a) The carefully cleaned rhizome with about 10 cm. of the roots, dried at room temperature, 1913 crop, average of 46 samples	73.3
(b) 1914 Crop, prepared as above, average of 41 samples	74.4
(c) 1913 Crop, prepared as above, average of 29 samples	75.00
Levisticum:—	
(a) The roots and crown carefully cleaned by washing, and dried at room temperature, 1913 crop, average of 32 samples (2-year-old plants)	75.7
(b) Prepared same as above, 1914 crop, average of 5 samples (3-year-old plants)	64.00
Inula:—	
The roots carefully cleaned by washing, and dried at room temperature. 1913 Crop, 2-year-old plants, average of 32 samples	66.6
Taraxacum:—	
The roots carefully cleaned by washing, and dried at room temperature. 1913 Crop, 2-year-old plants, average of 32 samples	73.4
Althaea:—	
The roots carefully cleaned by washing, and dried at room temperature, not peeled. 1913 Crop, 2-year-old plants, average of 27 samples	65.6

Percentage of Moisture

Phytolacca:—
The roots carefully cleaned by washing, and dried at about 80° Cent. One-year-old plants, average of 48 samples..... 74.9

Apocynum:—
The roots and rhizomes carefully cleaned by washing, and dried at room temperature. Average of 6 samples..... 60.00

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A CRITICISM OF THE UNITED STATES PHARMACOPŒIAL DESCRIPTIONS OF VEGETABLE DRUGS.

A THESIS SUBMITTED TO THE FACULTY OF PURDUE UNIVERSITY.

CHALMERS JOSEPH ZUFALL.

INTRODUCTION.

The inspection of crude drugs in a pharmaceutical manufactory requires continual reference to the descriptions of official drugs in the United States Pharmacopœia. While these descriptions are considered authentic, the question often arises, are they really accurate and correct for commercial drugs? Comments and criticisms are repeatedly found in the pharmaceutical journals which lead one to suspect inaccuracy on the part of the pharmacopœia committee which wrote these, and the purpose of this investigation is to determine how well these descriptions can be applied to the drugs of commerce and to authentic specimens.

The drugs are to be taken, one at a time, and large quantities of the material studied. The conditions for this study at the Eli Lilly and Company's plant are almost ideal, for we are able to see more than a mere sample from each bag; we can see the entire contents of the bags and bales as they are emptied in the mill-room ready for grinding. Then the pharmacopœial description is compared with as many authentic specimens as possible. The herbarium specimen is first checked up with the botanic authorities and then the crude drug, the herbarium specimen and the pharmacopœial description are compared. In many cases, three to five mounted specimens of the one species from widely-separated regions were used, thus giving any variations due to climatic conditions.

Aconite:—The six lots and ten samples examined show that the pharmacopœial description is correct for Aconitum napellus except as to the thickness of the root. Many roots were found to be 35 mm. in diameter at the crown. The pharmacopœia gives this diameter as "10 to 20 mm." It should be given as "10 to 35 mm. in diameter at the crown."

In order to aid in distinguishing the official drug from A. fischerii, which is being offered on the market as the true aconite, the pharmacopœia should add that the "starch grains are 4 to 12 microns in diameter." Those of A. fischerii are much larger, being 10 to 22 microns.