

NOTES ON AGAR—MOISTURE AND ASH CONTENT.

BY E. L. NEWCOMB AND C. E. SMYTHE.

Agar is a drug which appears always to contain a considerable amount of water. Earlier, the water content of six samples was reported. Each of these contained from 11 to 15 percent of moisture. The drug is one which is likely to rapidly take up water from the atmosphere unless it is stored in a dry room or air-tight container. The moisture taken up from the atmosphere may amount to as much as 33.7 percent.

In order to gain further information on the moisture and also the ash content of this drug, six additional samples have been worked. The samples were each dried for twenty-four hours in a small drying oven, run at a temperature of about 120° F. The samples were then ground in a small hand mill to a number 20 powder and ashed.

Some reference has been made to inferiority of quality of Agar. All of the samples which we have been able to obtain thus far have been of excellent appearance. A few only were slightly yellowish in color. Samples which are off in color contain a larger number of diatoms. The dark samples run slightly higher in ash.

Our additional results are tabulated herewith, as follow:

Sample No.	Source of Sample and Remarks.	Moisture.	Total Ash.	Ash insoluble in 5% HCL.
1.	Commercial whole, bought in 1920, extra light color...	11.3	3.94	0.43
		.....	4.01	0.62
2.	Commercial whole, bought in 1920, very light color...	13.3	3.84	0.62
		.....	3.93	0.47
3.	Commercial granulated, bought in 1920, medium color.	18.3	4.13	0.63
		.....	4.09	0.83
4.	Commercial whole, bought in 1920, medium color.....	15.9	4.36	0.61
		.....	4.33	0.68
5.	Commercial granulated, for culture media, bought 1918, dark.....	11.1	4.42	0.95
		.....	4.58	0.96
6.	Commercial whole, bought in 1918, dark color.....	8.02	4.32	1.10
		.....	4.35	1.20

DEPARTMENT OF PHARMACOGNOSY,
COLLEGE OF PHARMACY,
UNIVERSITY OF MINNESOTA.

 ASPIDIUM STANDARDS.

BY E. L. NEWCOMB.

Inability to obtain supplies of the drug *Aspidium* has made it somewhat difficult to check up on some of the present requirements. It appears that practically no drug has entered the country during the last four or five years. The oleo-resin has, however, been imported. Some six different orders were placed for whole *Aspidium*. Not a single order has been filled. The studies which are reported herewith were made with crude material purchased several years ago, and with fresh plant material grown in the Medicinal Plant Garden of the College of Pharmacy, University of Minnesota.

It will be noted that the ash yield of the freshly prepared stipes from the Minnesota drug was somewhat higher than the present allowance of 3 percent. One entire plant was used for this work. The stipes were not as large and fleshy as those usually obtained in commerce. The species represented by the Minnesota drug was *marginalis*. The ash yield of the old samples of commercial drug would indicate that the present standard is satisfactory. The high total and acid-insoluble ash of the scrapings and cleanings indicates the need for care in removal of outer portions during the preparation of the drug. The high acid-insoluble ash of the samples of *Osmunda* sold as *Aspidium* clearly indicates the desirability of an acid-insoluble ash standard for this drug. The very nature of the *Osmunda* rhizome makes the careful cleaning of it a rather difficult and tedious process. It appears that the normal ash of *Osmunda* is about 2 percent.

If supplies of *Aspidium* can be obtained, further studies will be made not only on the ash, but also in the filicic acid content.

TOTAL AND ACID-INSOLUBLE ASH OF ASPIDIUM DETERMINATIONS—By C. H. ROGERS
AND C. W. FOLKSTAD.

No.	Remarks.	Percent Total Ash.	Percent Acid- insoluble Ash.
1.	<i>Aspidium</i> , powdered, old commercial sample.....	2.80 2.76	0.36 0.27
2.	<i>Aspidium</i> , whole, commercial, old, powdered in this laboratory....	2.69 2.64	0.67
3.	<i>Aspidium</i> , whole, commercial, old, powdered in this laboratory.....	2.64 2.62	0.50 0.32
4.	<i>Osmunda</i> , sold for <i>Aspidium</i> , powdered in this laboratory.....	4.06 4.20	2.29
5.	<i>Osmunda</i> , sold for <i>Aspidium</i> , powdered in this laboratory.....	3.38 3.36	2.31 2.28
6.	<i>Dryopteris marginalis</i> , peeled stipes, Minnesota grown plant.....	3.95 3.79	0.12 0.09
7.	<i>Dryopteris marginalis</i> , whole stipes, not peeled, from Minnesota grown plant.....	4.18 4.17	0.67 0.61
8.	<i>Dryopteris marginalis</i> , peelings from stipes, Minnesota grown plant.	4.17 4.18	0.50 0.50
9.	<i>Dryopteris marginalis</i> , scrapings and cleanings from Minnesota grown stipes.....	8.31 8.51	4.57
10.	<i>Dryopteris marginalis</i> , roots from one plant, Minnesota grown.....	3.21 3.15	0.46 0.21

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COLLEGE OF PHARMACY, UNIV. OF MINN.

THE STABILITY OF CHURCHILL'S TINCTURE OF IODINE.*

BY JOSEPH L. MAYER.

Solutions of iodine in alcohol are very unstable and as a result the U. S. P. tincture of iodine contains potassium iodide which very effectively prevents decomposition.

About two years ago, we had a query submitted to us as to whether Churchill's tincture of iodine made according to the N. F. formula with only 3.3 grammes

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