

17. ZINC-CHLOR-IODIDE. STEPHENSON'S REAGENT.

There was obtained in all cases a brownish white precipitate insoluble on the addition of water, but soluble in dilute acetic acid.

18. REAGENTS WITH NO VISIBLE REACTION.

Tannic acid, barium nitrate, cobalt chloride, glucose, glycerine, manganese chloride, nickel chloride, phthalic acid, potassium ferri and ferrocyanides, sodium benzoate or nitrite. The reactions with potassium permanganate and chromic acid were so unstable that they seem worthless as test reagents for this class of compound.

NOTE.

Many of the above tests confirm earlier reports upon the various reactions of ephedrine, but this is the only comprehensive statement dealing with solutions of known strengths.

LITERATURE CITED.

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- (3) C. T. Feng, *Chinese J. Physiol.*, 1 (1927), 397-406.
- (4) C. T. Feng, *JOUR. A. PH. A.*, 21 (1932), 8-15.
- (5) C. T. Feng and B. E. Read, *Chinese J. Physiol.*, 2 (1928), 87-96.
- (6) B. E. Read and C. T. Feng, *Ibid.*, 1 (1927), 297-304.
- (7) K. Tsiang and E. D. Brown, *JOUR. A. PH. A.*, 16 (1927), 294-296.

A NOTE ON THE WATER CONTENT OF MAGNESIUM OXIDE.*¹

BY JACOB E. SCHMIDT AND JOHN C. KRANTZ, JR.

INTRODUCTION.

The Pharmacopœia recognizes dual standards for magnesium oxide and heavy magnesium oxide. The rubric requires 96 per cent purity after ignition and permits 10 per cent water to be present in the compounds in general use. In the preparation of the monographs for these compounds for the forthcoming edition of the Pharmacopœia, the authors had occasion to examine several commercial samples of each variety of magnesium oxide. The percentage of water found in the specimens showed great variation. In many instances the water content of the light variety exceeded the Pharmacopœial limit. The highest quantity of water found was 22 per cent.

On account of these findings, the authors investigated the problem and recorded their observations in this communication.

TABLE I.—PERCENTAGE OF WATER IN COMMERCIAL SAMPLES OF MAGNESIUM OXIDE.

No.	Light. Per Cent Water.	Heavy. Per Cent Water.	No.	Light. Per Cent Water.
1	22.0	7.8	8	11.5
2	20.3	7.8	9	18.0
3	20.3	7.8	10	21.9
4	19.2	3.4	11	19.3
5	19.4	6.5	12	22.5
6	14.0		13	14.5
7	17.9			Mean 18.5 per cent

* Scientific Section, A. PH. A., Madison meeting, 1933.

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EXPERIMENTAL.

Three commercial samples of each variety of magnesium oxide were ignited to a constant weight and the absorption of water from the atmosphere was studied. The samples were stored at room temperature in crucibles with liberal access to air. The specimens were not mixed at the various intervals when the increase in weight was determined.

These data are recorded in Table II.

TABLE II.

Time in Days.	Light Variety. Percentage Moisture.			Time in Days.	Heavy Variety. Percentage Moisture.			Relative Humidity.
	I.	II.	III.		I.	II.	III.	
1	6.93	5.65	7.15	1	2.93	1.30	1.54	43
2	9.90	8.65	10.05	2	4.63	1.85	2.30	44
3	12.12	10.68	11.82	3	6.16	2.22	2.70	68
4	13.50	12.44	13.21	4	7.34	2.32	2.85	68
5	14.31	13.42	14.20	5	7.85	2.39	2.85	72
7	14.49	13.70	14.38	7	8.11	2.42	2.94	52
8	14.70	13.88	14.52	8	8.42	2.52	3.10	48
9	14.98	14.28	14.85	10	8.82	2.42	3.18	67
11	15.04	14.39	14.92	13	9.15	2.57	3.35	54
13	15.41	14.71	15.25	21	10.01	2.68	3.38	61
21	16.20	15.46	16.08	28	10.20	2.70	3.44	50
28	16.40	15.62	16.25	37	10.42			58
37	16.70	15.80	16.41					

DISCUSSION AND CONCLUSIONS.

The foregoing results indicate, that when stored under the usual commercial conditions, the light variety of magnesium oxide contains considerably more than 10 per cent of water: average 18.5 per cent. The ratio MgO:H₂O in the compound becomes quite stable at approximately 2:1.

The heavy variety of magnesium oxide as found commercially generally falls within the limit of the U. S. P. moisture requirement.

BUREAU OF CHEMISTRY,
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COÖPERATION BETWEEN PHYSICIANS AND PHARMACISTS OF THE NORTHWEST.

BY GEORGE BENDER.—SYMPOSIUM ON "PRACTICING PROFESSIONAL PHARMACY."

"Some day I think some one should write a thesis on the leavening power of a cup of coffee. I think that would have more effect than anything else in bringing the physicians, pharmacists and dentists of the Northwest, particularly of the Twin Cities area, together.

"About three years ago the doctors and druggists of Minneapolis, by mutual consent, decided it was time to get together and talk things over. Individual problems and individual misunderstandings had arisen from time to time, and no solution seemed possible. By common consent, a committee was appointed from the medical association, from the pharmaceutical association and from the dental association to get together and talk things over.

"From this humble beginning, what is now known as the Inter-Professional Relationship Committee has developed, and efficient committees are functioning in each of the Northwest states. These committees have done some rather remarkable things." (We hope to have the paper for a later issue of the JOURNAL.)