TABLE I.—SOLIDIFICATION TEMPERATURES. SYSTEM, EPHEDRINE–WATER.

Per Cent.			Per Cent.		
Ephedrine.	Water.	Solidification Temperature.	Ephedrine.	Water.	Solidification Temperature.
100.00	0.00	38.1	97.15	2.85	36.0
99.65	0.35	36.2	96.65	3.35	37.6
99.25	0.75	34.0	95.85	4.15	39.1
99.10	0.90	33.0	95.45	4.55	39.8
98.80	1.20	32.5	95.10	4.90	40.0
98.50	1.50	32.1	94.85	5.15	40.0
98.45	1.55	32.1	94.50	5.50	40.0
98.25	1.75	32.4	93.50	6.50	39.8
98.00	2.00	32.8	92.50	7.50	39.5
97.55	2.45	34.2	91.85	8.15	39.2

TABLE II.

Press. Mm.	B. Pt.	Press. Mm.	B. Pt.
745	260	65	185
645	257	32	172
545	253	A. D. M. A. Proc. 1933 (2)	
445	246	25	152–153
345	237	20	146–148
245	224	10	132–133
145	205	7	127–128

When the distilled anhydrous base was crystallized from an anhydrous medium, such as dry ether, crystals were obtained which analyzed 100 per cent ephedrine. When crystallized from water or dilute alcohol, the crystals analyzed 95 per cent.

The anhydrous crystals were very hygroscopic, while the hydrated material did not tend to take up or give off water.

Dr. George L. Clark has kindly studied the crystalline forms of the anhydrous and hydrated bases and found them to be different.

SUMMARY.

Crystalline anhydrous ephedrine was prepared and its melting point determined.

The existence of a hemi-hydrate of ephedrine containing 95 per cent of the base was proved. The anhydrous and hydrated alkaloids differ in crystalline form, melting point, stability and solubility in oil.

The effects of different amounts of water on the melting point of ephedrine were determined.

REFERENCES.

(1) Emde, H., *Helv. Chim. Acta*, 12, 365 (1929).
(2) Am. Drug. Mfrs. Assoc., *Proc.*, 235 (1933).

DISPENSARY SERVICE.

Dispensary service owes its existence to the great London fire in 1666. The Pennsylvania Hospital established the first dispensary in this country (1751).