

A NOTE ON THE EPHEDRINE CONTENT OF EPHEDRA VULGARIS  
VAR. HELVETICA.

BY PETER MASUCCI AND KO SUTO.

Chen<sup>1</sup> has studied the ephedrine content, the alkaloid in *Ephedra vulgaris* var. *helvetica*, and found it to vary from 0.018 to 0.091 per cent. These results were obtained on three samples assayed according to the method given in the U. S. P. IX under Belladonna Root.

Using the same method of assay recommended by Chen, and the same factors, namely: one cubic centimeter of  $N/10$   $H_2SO_4$  is equal to 0.016513 gram of ephedrine, we obtained a much higher content of ephedrine, from a sample of Ma Huang. The sample was from a small lot of drug shipped directly to us from China and identified botanically as *Ephedra vulgaris* var. *helvetica*. The ash content was found to be 14.97%. The alkaloidal content was determined by two different analysts, who found 0.305 and 0.298% respectively.

Three fluid extracts were made from this drug using various amounts of alcohol in the extraction fluid. The fluid extracts were assayed using the same method and the alkaloid found was 0.3117; 0.4623 and 0.3060 grams per 100 cc.

Recently we had occasion to assay a sample of *Ephedra vulgaris* submitted by a dealer in crude drugs. This was found to contain 0.515% ephedrine.

The ephedrine content of the two samples of *ephedra vulgaris* assayed by us was so much higher than that reported by Chen that we think this is worth while recording in literature.

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## DIGITALIS STANDARDIZATION AT GENEVA.

BY E. A. BILHUBER.

The Health Committee of the League of Nations met early in September, 1925, at Geneva, and adopted reports from a committee on the biological standardization of certain remedies. This included methods for the biological standardization of digitalis and digitalis preparations. The reports by Dr. Gilchrist of Edinburgh, and Dr. Andrus of Baltimore, on the clinical comparison of samples of digitalis and its preparations were discussed and Professor Magnus presented memorandum on biological assay.

Professor Cushny dealt with certain difficulties which he had experienced in the application of a modified Hatcher method on the anesthetised cat, the results seeming to indicate that the cats fell into two classes, one with a definitely higher resistance to digitalis than the other. Cushny also laid stress on the methods of assay in which the frog was used as they may be expected to yield results of a high order of accuracy. Professors Pick, Straub and Rost all reported on the frog method as a valuable means of assay.

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<sup>1</sup> A Pharmacognostic and Chemical Study of Ma Huang (*Ephedra Vulgaris* var. *Helvetica*) K. K. Chen, JOUR. A. PH. A., Vol. 14, p. 189 (1925).