

LETTER TO THE EDITOR

The Determination of Santonin in Artemisia—Solubility Correction

SIR,—Many methods of assay for santonin in artemisia depend, in their final stages, upon the weight of santonin crystallised from ethanol (15 per cent. w/w). In a method recently described by Qazilbash¹ a solubility correction of 0.0064 g./90 ml. is applied, whereas published solubilities^{2,3} for santonin in this solvent vary from 0.04 to 0.06 g./100 ml. When his method was applied to a santonin-free sample of herb to which a known quantity of santonin had been added low results were obtained, whereas a recovery of 99 per cent. was obtained using a correction based on a solubility of 0.044 g./100 ml. of solvent determined in this laboratory. Furthermore, in the assay the ultra-violet absorption spectrum of the mother liquor left after removing the crystals agrees with such a correction.

On the basis of the solubility determined in these laboratories, a correction of 0.04 g. would be valid and, therefore, any artemisia containing less than 0.4 per cent. of santonin would yield no crystals and the assay figures would be reported as nil. On the other hand, if Qazilbash's correction is valid, it should be possible to obtain crystals from artemisia containing as little as 0.07 per cent. of santonin. Reference to his Table II shows that the 24 samples examined fall into two groups, the smaller group containing more than 0.5 per cent. of santonin and the larger group reported as nil, but which on the basis of our suggested correction may have contained up to 0.4 per cent. of santonin. It would, therefore, be of interest to workers in this field if the data on which the 0.0064 g. correction is based, were brought forward.

Analytical Control Division,
May and Baker, Limited,
Dagenham, Essex.

J. ISAACS.

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REFERENCES

1. Qazilbash, *J. Pharm. Pharmacol.*, 1951, 3, 105.
2. British Pharmaceutical Codex, 1934, 926.
3. Coutts, *Quart. J. Pharm. Pharmacol.*, 1932, 5, 369.

ABSTRACTS (Continued from page 422)

Dihydrostreptomycin Sulphate, Toxicity for Auditory Nerve. C. Don and J. Gregory. (*Lancet*, 1952, 262, 72.) An extensive review of published reports of the toxicity of dihydrostreptomycin for the auditory nerve suggests that the hydrochloride is more toxic than the sulphate, possibly because its chemical purity is lower. A follow-up investigation was carried out on 26 patients who had been treated for more than 6 weeks with 1 g. daily of dihydrostreptomycin sulphate of a minimum purity of 88 per cent. No cases of miliary or meningeal tuberculosis were included since auditory effects are known to occur in these patients without any form of chemotherapy. 4 cases showed auditory impairment: 1 with audiometric loss only, 1 with slight deafness, 1 with moderate deafness and 1 with severe deafness. The results obtained suggest that the purest form of dihydrostreptomycin sulphate at present available is toxic to the auditory nerve.

H. T. B.