

ted with ethanol and were washed successively with ethanol/water, with ethanol and with ether.

The quantitative paper chromatography of the samples was carried out according to Saeman *et al.*² using the solvent systems ethyl acetate-acetic acid-water (3:1:3) and, for the separation of glucose and galactose, ethyl acetate-pyridine-water (2:1:2).

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Preparation of Thiotaaurine (Aminoethanethiosulfonic Acid)

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Recently¹ an enzymatic transsulfuration product from β -mercaptopyruvate and hypotaaurine (2-aminoethanesulfinic acid) was identified as 2-aminoethanethiosulfonic acid, for which the shorter name thiotaaurine was suggested. Thiotaaurine has now been synthesized with taurine as starting material. Taurine was first transformed into phthalimidoethanesulfonyl chloride² and the latter then converted to hypotaaurine by a novel method. The sulfonyl chloride was first reacted with phenylhydrazine to give phthalimidoethanesulfonyl phenylhydrazide which was not isolated but instead heated with an excess of phenylhydrazine and tri-*n*-butylamine in

ethanol, in order to remove the phthaloyl group³. During this treatment it was found that the sulfonylphenylhydrazide decomposed to the corresponding sulfinic acid⁴. Hypotaaurine was thus formed (yield 80 %) and precipitated with methyl ethyl ketone. Thiotaaurine was then obtained from hypotaaurine through treatment of the latter with ammonium polysulfide⁵ and crystallized from ethanol-water (yield 40 %). Colourless crystals, m.p. about 213° (decomp.), were obtained and found to contain 22.5 % cyanide labile sulfur⁶ (calc. for $\text{NH}_2\text{C}_2\text{H}_4\text{S}_2\text{O}_2\text{H}$: 22.7 %). Paper chromatography of the compound in 4 different solvent systems demonstrated only the presence of one single component. It was previously suggested that thiotaaurine might be identical with an unknown sulfur containing compound from human blood, first detected by Smith and Tuller⁷ by paper chromatography and reported to behave as taurine. This possibility could now be excluded, as the synthetic thiotaaurine was found to be clearly resolved from taurine in the solvent system used by Smith and Tuller.

Details of this work will be published later.

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