

PROJECT TITLE : ANALYTICAL INVESTIGATIONS
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ORGANIC ACIDS BY GC

Work on the development of a gas chromatographic method for the group analysis of citric, lactic, malic, succinic, fumaric, tartaric, pyruvic and oxalic acids in fermented tobacco extracts, requested by Biotechnology (1), has been completed. A typical gas chromatogram of an experimental sample is shown in the figure.

A PME Analytical Method is presently being prepared.

ORGANIC ACIDS AND PHENOLS BY GC

As an extension to our work on the determination of organic acids in fermented tobacco extracts, an analytical procedure for the simultaneous analysis of a wide range of aliphatic C-2-C₁₈ and aromatic mono carboxylic acids and of phenols in tobacco and in tobacco smoke condensate, is presently being investigated. The method involves a steam distillation step (clean-up), derivatization of acids and phenols by extractive alkylation, using penta-fluorobenzylbromine / tetrabutylammonium ion and analysis of pentafluorobenzyl esters and pentafluorobenzyl ethers by (GC)² and EC detection.

SERVICE FOR OTHER GROUPS

- Six triacetin samples were analysed for QC by (GC)² (2)(3).
- Phosphate and sulfate were determined in 85 samples for Biotechnology.
- Amino acids were analysed in 12 samples of Project SAVOURY.

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