〔HRC. & CC., **10**, 201 (1987)〕

Coping with the Chair-Shaped Peaks Resulted from Injection of Reversed-Phase HPLC Fraction in On-Column Gas Chromatography.

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It has been reported that the alkanes dissolved in polar solvent (*e. g.* methanol) and introduced onto a non-polar column by on-column injection exhibit poor peak shapes. We found the fact that poor peaks of alkanes in methanol are improved by co-injection with a small amount of water. Probably alkanes having poor affinity for water-containing solvent will pass through over the flooded zone formed on the stationary phase, then undergo complete cold trapping at the head of non-solvent stationary phase and show sharp peaks. Injection of a large volume of sample in methanol-water does not cause peak distortion, but does lead to an apparent reduction of retention time of alkanes. A hypothesis for this phenomenon was proposed.

〔J. Chromatogr., **414**, 454 (1987)〕

Simple and sensitive method for the determination of acetaldehyde in blood by gas chromatography.

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The present paper describes a reliable and sensitive GC-ECD method for assaying low levels of acetaldehyde in blood. To 0.6 ml of acetonitrile was added 0.5 ml of human blood and after shaking, 0.1 ml of aqueous pentafluorobenzyloxylamine solution was added to 0.25 ml of the supernatant. The O-pentafluorobenzyloxime of acetaldehyde was extracted with *n*-hexane and a 1-μl aliquot of the solution was injected onto GC. For GC, a 2-m glass column packed with 2% OV-17 maintained at 90°C was used. The blood samples spiked with 9 μM acetaldehyde was recovered 99.8%. The standard curve exhibited a good linearity with correlation coefficients 0.997 and the detection limit was 1 μM.

〔Acta Urol. Jpn., **33**, 645 (1987)〕

Detection of Polyamines by an Enzymatic Assay (6). Fundamental and Clinical Studies of a Simple Enzymatic Method for Determining Total Polyamines in Blood.

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Polyamines in trichloroacetic acid extract from 1 ml of blood were isolated on an anionexchange column and measured spectrophotometrically using polyamine oxidase and putrescine oxidase. The simple enzymatic method gave high recovery of 98.4% and within-run precision. Blood polyamine levels were determined in 108 patients with genitourinary cancers, 29 patients with benign prostatic hypertorophy, 18 patients with benign urological diseases and 25 normal subjects. Although polyamines were not significantly elevated in the low stage of cancer, elevation was observed at a high stage of malignancy.