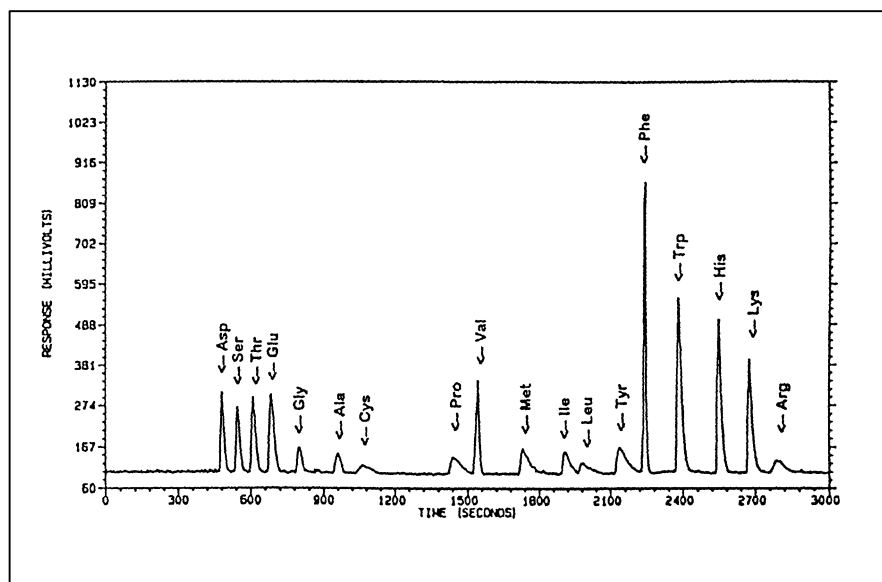


Amino Acid analysis of peptides using HPLC with ELS detection



HPLC separation of 18 common amino acids using ELS detection
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J.liq. Chrom.& Rel. Technol. , 22(7), 1009-1025 (1999)

A new procedure for the amino acid analysis of peptides has been devised using HPLC with ELS detection. This procedure eliminates the need for complex derivatization schemes inherent of previous amino acid analysis procedures since the ELSD detects amino acids directly. This quantitative method detects and separates 18 of the common amino acids in one hour run time using cation exchange (gradient of pH) chromatography coupled with ELS detection. The procedure was tested by analysing the hydrolysate of a synthetic polypeptide. Detection limits depending on the amino acid being analysed and was as low as 200 picomoles. Also this approach yields a simple universal method that is well suited for the amino acid analysis of peptides, of which sufficient quantity is available.

Chromatographic conditions :

Column : Dionex IonPac CS-10 (250x4mm id)

Injection Volume : 10µl.

Flow Rate : 1 ml/mn

Mobile phase A : 0.075% TFA pH = 2.07 (ammonium acetate in water).

Mobile phase B : 0.1% TFA pH = 3.50 (ammonium acetate in water).

Mobile phase C : 0.1 M ammonium acetate in water.

Gradient:

t	0	12	12.01	25	25.01	35	50	65
A%	0	100	20	20	10	10	0	0
B%	0	0	80	80	90	90	0	0
C%	0	0	0	0	0	0	100	100

Nebulizer temperature : 45°C

Evaporation temperature : 55°C

Pressure : 1 bar

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