THE CALIFORNIUM FISSION FRAGMENT MASS SPECTROMETRIC (FHIID.—MS) ANALYSIS OF PHENYLTHIOHYDANTOIN AMINO ACIDS

E. M. Jayasinghe
(*Dept. of Physics, University of Colombo, Colombo* 3)

I. Kammensky. P. Hakansson, *and* **B. Sundqvist**
(*Tandem Accelerator Laboratory, Uppsala, Sweden*)

All twenty naturally occurring PTH– amino acids can be easily identified with a new mass spectrometric technique called FHIID–MS (1, 2, 3).

All PTH amino acids yield a molecular ion as a proton adduct $(M + H)^+$ in positive spectra. Negative spectra do not give good yields but for most PTH amino acids $(M - H)^-$ is observed.

However FHIID-MS is a cheaper technique(4) compared with the cost of HPLC equipment. The HPLC is the standard method for identification of PTH—amino acids at present. Complete automation is discussed and is favourable since actually no conversion of 2 anilino 5- thiazolinone to the corresponding PTH amino acids is necessary (5, 6), thus saving time. With proper equipment, analysis time can be as short as one minute.

Abbreviations

FHIID-MS : Fast Heavy Ion Induced Desorption Mass Spectrometry.
PTH-Amino acids—Phenylthiohydantoin Amino acid derivative.
HPLC : High Pressure liquid Chromatography.

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