

CONCEPT: EDMAN DEGRADATION SEQUENATOR AND SEQUENCING DATA ANALYSIS

- Edman Degradation Procedure is automated & carried out in a machine called a _____.
- Sequenator mixes reagents, separates/identifies products, and records data.
- As little as ____ nanogram (or 10 pmoles) of an amino acid can be detected.

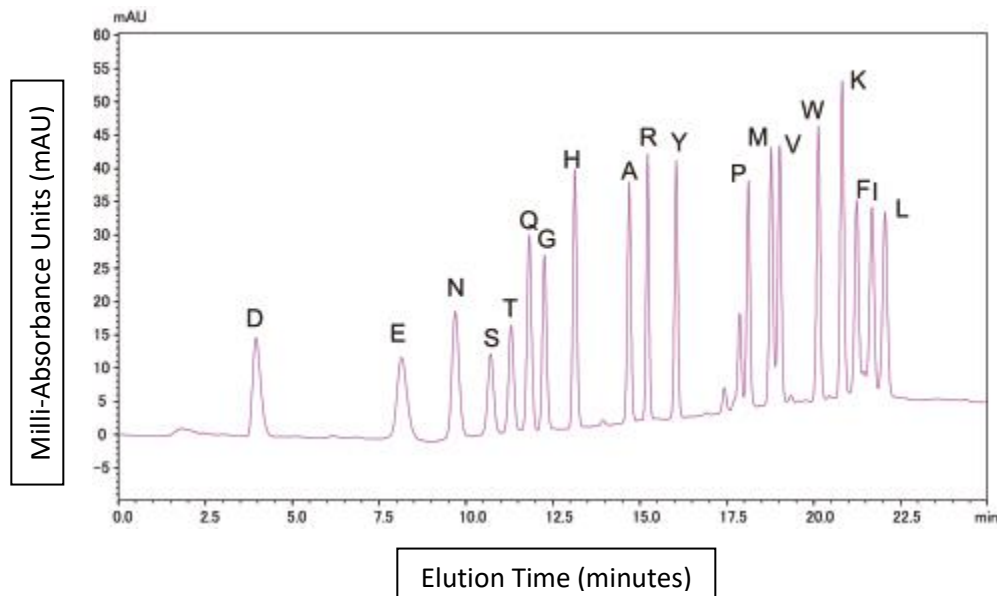


Image of an advanced protein sequenator.

Analyzing PTH-Amino Acids with HPLC

- Edman Degradation is used in conjunction with *High-Performance Liquid Chromatography* (_____).
- Unknown PTH-amino acids are identified by their elution positions relative to _____ amino acid controls.
- Edman degradation can more easily differentiate amino acids of the same mass (ex. Leu & Ile).
- Amino acid sequence revealed from _____ to _____ in order from the ____-terminal to the ____-terminal end.

EXAMPLE: HPLC Chromatogram of PTH-Amino Acids.



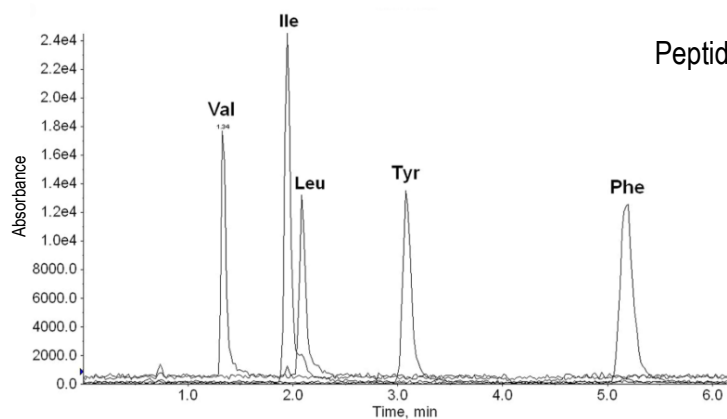
*HPLC chromatogram reveals peptide sequence from left to right (N-terminal to C-terminal):

N-terminal _____ C-terminal

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PRACTICE: Separately determine the peptide sequences indicated by the HPLC chromatogram & mass spectrum below.

A) What is the peptide sequence indicated by the HPLC chromatogram?



Peptide sequence: _____

B) What is the peptide sequence indicated by the mass spectrum (assuming prominent peaks correspond to y ions)?

Peptide sequence: _____

