

1. Edman degradation of a 10 residue peptide gave the following PTH-amino acids at each cycle. After the 6<sup>th</sup> cycle the amount of PTH-amino acid that was released was insufficient for analysis.

Cycle 1	Alanine (Ala)	Cycle 4	Leucine (Leu)
Cycle 2	Glycine (Gly)	Cycle 5	Isoleucine (Ile)
Cycle 3	Lysine (Lys)	Cycle 6	Glycine (Gly)

Sequence of partial peptide:

Which cleavage reagent would you use to fragment the peptide in order to determine the remainder of the sequence? Choices are: CNBr (cyanogen bromide), Trypsin, and Chymotrypsin. Why did you select that particular reagent?

The second digestion gave the following sequence: Leu-Ile-Gly-Met-Ser-Ser

Sequence of peptide: \_\_\_\_\_

What reagent would you use to identify the last amino acid?

2. A 9-residue peptide was digested into three peptides (A, B, C) with treatment of cyanogen bromide. The three peptides were purified and each was sequenced using Edman degradation, giving the following sequences:

Ala-Gly-Met	Ser-Gly-Met	Lys-Gly-Met
A	B	C

There are 6 possible sequences that would be consistent with the above.

ABC: Ala-Gly-Met-Ser-Gly-Met-Lys-Gly-Met

ACB: Ala-Gly-Met-Lys-Gly-Met-Ser-Gly-Met

BAC: Ser-Gly-Met-Ala-Gly-Met-Lys-Gly-Met

BCA: Ser-Gly-Met-Lys-Gly-Met-Ala-Gly-Met

CAB: Lys-Gly-Met-Ala-Gly-Met-Ser-Gly-Met

CBA: Lys-Gly-Met-Ser-Gly-Met-Ala-Gly-Met

The same peptide was digested with Trypsin, giving two fragments. The partial sequence of one of these peptides was:

Gly-Met-Ser-Gly-Met-Ala....

Which of the 6 possible sequences is correct?