

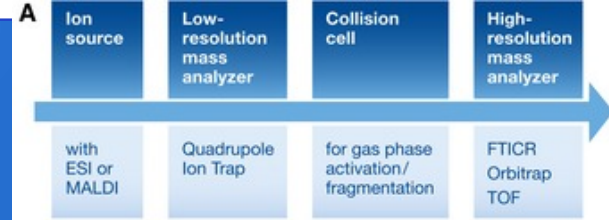
C5855

Hmotnostní spektrometrie

Jan Novotný

2019

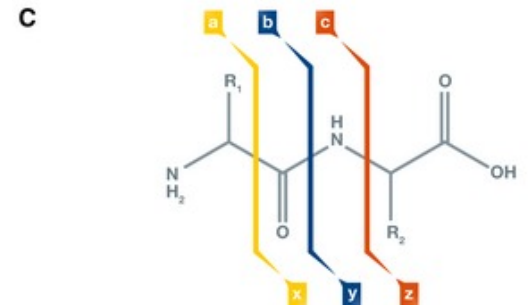
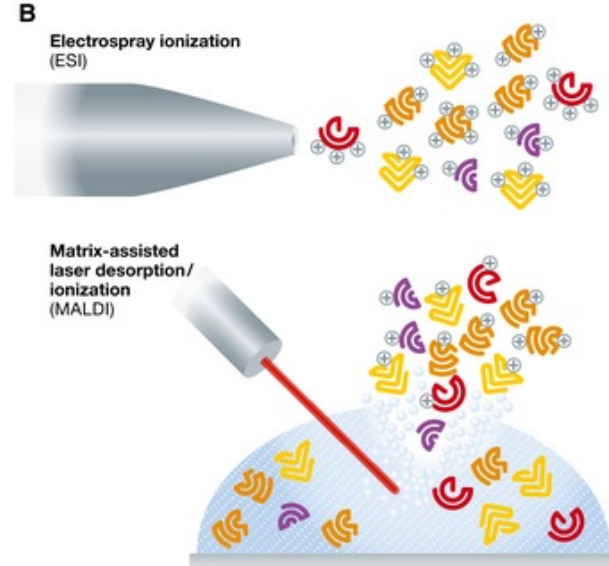
Intro



Compare two basic ionization methods of biomolecular MS.

What is the meaning of term “tandem MS spectrometer”.

Explain the abbreviation MALDI-TOF, ESI-FTICR.



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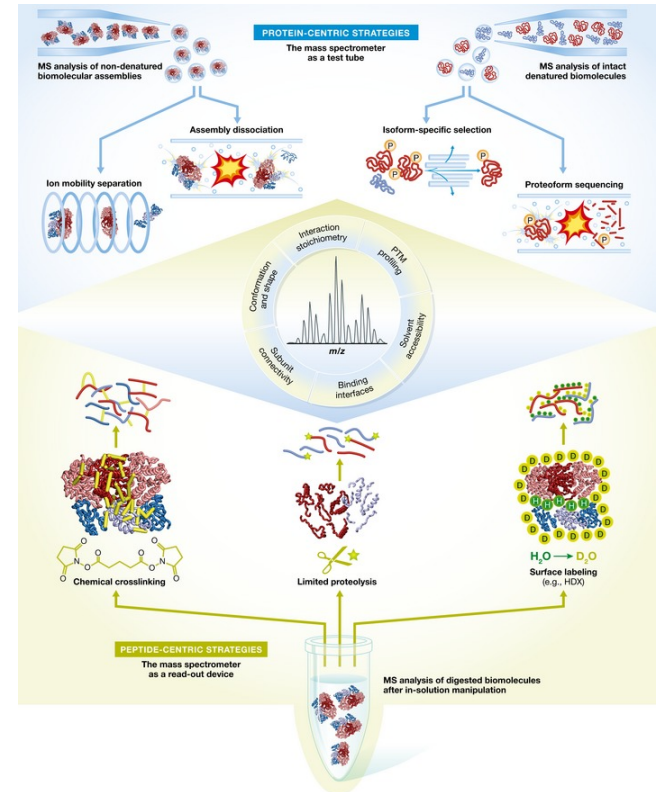
Calculate the mass change associated with following mutation:

1. Gly---Ser

2. Ser---Ser-P_i

3. Lys --- N-acetyllysine

What is the biological function of 2 and 3 posttranslational modifications?



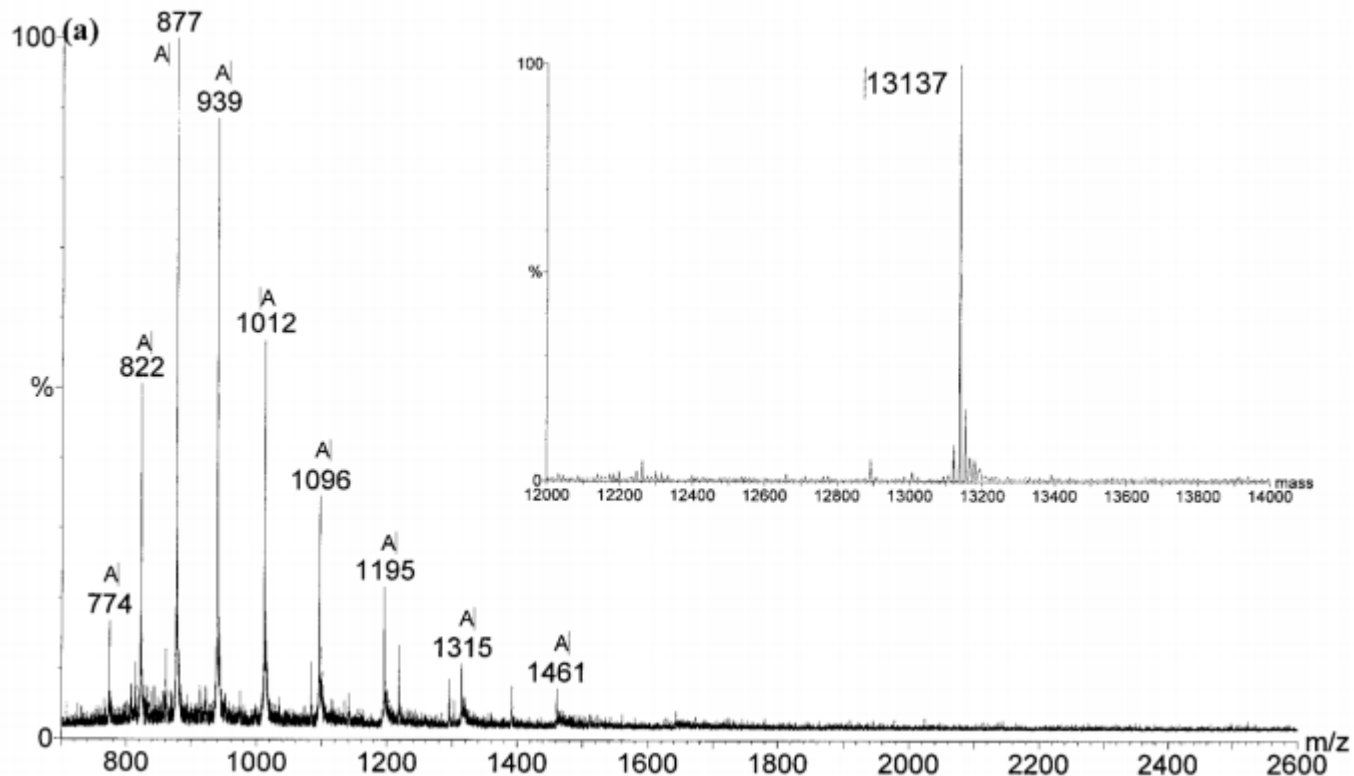
Campbell textbook

3.5.2 A MALDI TOF mass spectrum gave five main peaks with m/z values and relative intensities as follows:

m/z	10 176.5	17 659.7	20 350.8	35 317.3	40 702.5
Intensity (%)	40	20	100	80	10

ESI-MS

Estimate the protonation charge and molecular weight of pure protein based attached MS.



FA identification

Assign the two common fatty acids to presented MS spectra showing fragmental analysis.

Explain the intensity pattern of bottom spectrum.

