

Homework no. 6

Modern Techniques in Biophysics

Topic: Mass Spectrometry

Due date: April 3, 2015

Problem 1: ESI vs MALDI

Differentiate explicitly the fundamental difference between these 2 mass spectrometry techniques: electrospray ionization (ESI) and matrix-assisted laser desorption/ionization (MALDI). How does each technique work for chemical analysis?

Problem 2: Fourier-Transform Ion Cyclotron Resonance

Explain in detail as to how fourier-transform ion cyclotron resonance (FT-ICR) works.

Problem 3: Radius of Gyration

Solve problem 1 on page 151 (Biomedical Applications of Biophysics).

Problem 4: Translational Energy

Solve problem 2 on page 151 (Biomedical Applications of Biophysics).