

MASS SPECTROMETRY (MS)



Intended Use of the Instrument: To determine molecular mass of compounds

Instrument Brand/Model: Advion/Expression CMS L

AGU CRF Thematic Laboratory: Mass Spectrometry Laboratory

Location of the Instrument: AGU-CRF LAB4

Academic Director(s) of the Instrument:

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Responsible Specialists of the Instrument:

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Mass spectrometry is an analytical method to determine the mass to charge ratios of ionized molecules by using various techniques. In this way, atomic composition and configuration can be determined based on relative masses. Among all ionization methods, the atmospheric pressure chemical ionization (APCI) technique within the CMS instrument stands out due to the fact that solid and liquid samples at the nanogram level become positive or negative charged ions directly without any pre-treatment. Charged ions are detected based on their mass to charge ratio using Quadrupole measurement method before reaching the detector. CMS is suitable for analysis of molecules/macromolecules having the mass to charge ratio between 10-2000. MS can be used in various applications including food and beverage, pharmaceutical chemistry, biomedical, peptide and protein.