

Bruker Esquire 3000 Plus Ion Trap Mass Spectrometer

System:

HPLC Agilent 1100 Series and Auto-sampler G 1329A ALS 1200 Series with Frizzier G1330B FC/ALS Therm

Detectors:

- UV detector

- Ion Trap MS Esquire 3000 Plus (Bruker Daltonics) Detector equipped with Electro-Spray or Atmospheric Pressure Ionization Sources. Positive and Negative Mode.



Liquid Chromatography/Mass Spectrometry (LC/MS) is fast becoming the preferred tool of liquid chromatographers. It is a powerful analytical technique that combines the resolving power of liquid chromatography with the detection specificity of mass spectrometry.

Liquid chromatography (LC) separates the sample components and then introduces them to the mass spectrometer (MS).

The MS creates and detects charged ions.

The LC/MS data may be used to provide information about the molecular weight, structure, identity and quantity of specific sample components.

Sample types range from small pharmaceutical compounds to large proteins.

LC/MS is suitable for the analysis of large, polar ionic, thermally unstable and in volatile compounds.

LC/MS is suitable for many applications, from pharmaceutical development to environmental analysis.

The ability to detect a wide range of compounds has made API techniques popular with scientists in a variety of fields:

Molecular Weight Determination

Combinatorial Chemistry

Pharmaceutical Applications

Biochemical Applications

Clinical Applications

Food Applications

Environmental Applications

Electro Spray Ionization

Figure 1. A schematic of an ESI interface

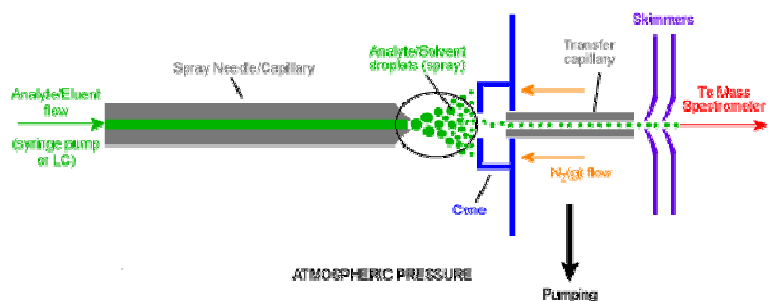
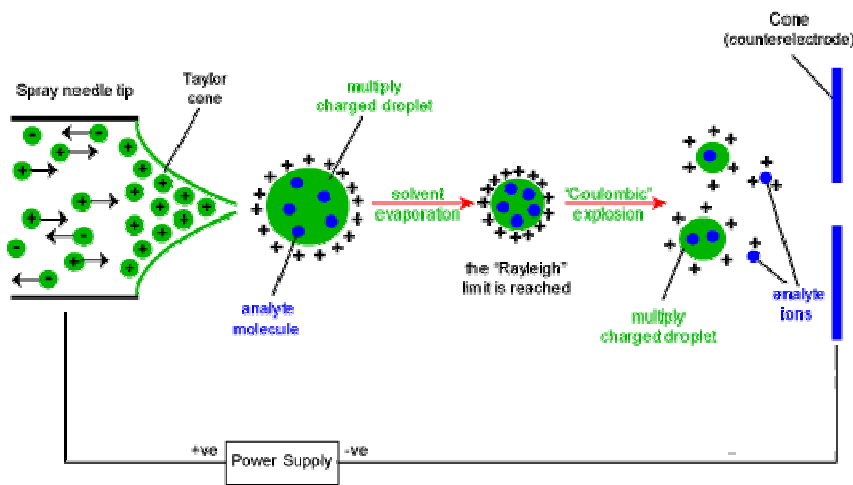


Figure 2. A schematic of the mechanism of ion formation



Atmospheric pressure chemical ionization

Figure 3 A schematic of the components of an APCI source

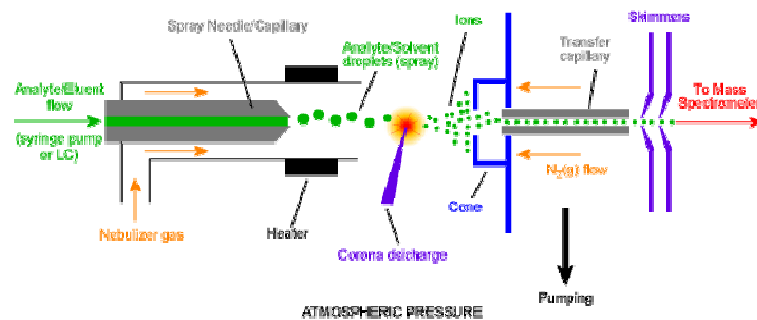


Figure 4 A more detailed view of the mechanism of APCI

