1980's, coupling of MS with LC (LC-MS) was almost impossible due to the incompatibility of MS ion sources at that time with a continuous mobile phase.

At the 1980's, fenn an American chemistry scientist develop another MS ion source "electrospray ion source".

Nowadays , wide range of clinical applications of LC-MS, and this is because LC-MS handle a wide range of single and complex mixture with high specificity.

Mass Spectrometry Instrumentation

MS operate by charging analyte molecules to a ionized state, with subsequent analysis of the ions that are produced during the ionization process, according to their mass to charge ratio(m/z).(snyder L. *Et al.*., 2011).

The following are different Ion Sources used in MS-LC

Electrospray Ionisation Source ESI:

This type of ion source are used with moderaitly polar.

ESI is a “soft” ionization source, which means little energy is imparted to

the analyte, and little fragmentation occurs.

Atmospheric Pressure Chemical Ionisation Source

This type are used for neutraly or non-polar molecules that are thermally stable and not well ionized by ESI. For APCI; multiple charging is not a feature and singly-charged ions dominate.