

# APPI Interface for LCMS-8045/ LCMS-8050/ LCMS-8060

Among wide range of LCMS applications, ESI ion source is useful for about 80-85% applications which covers highly polar to low polar compounds. APCI interface covers slightly non-polar compounds such as hormones, PAH etc. Although APPI has limited applications, it is useful for certain applications where compounds are highly non-polar.

Atmospheric Pressure Photo Ionization (APPI) Source for Shimadzu UFMS Series Triple Quad Mass Spectrometers is available for Shimadzu LCMS-8045, LCMS-8050 & LCMS-8060 only.

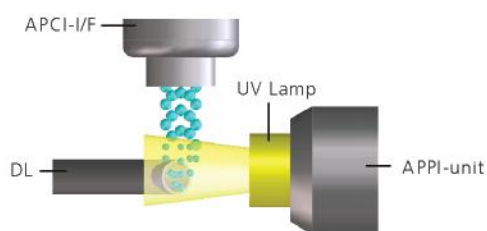
The introduction of the atmospheric-pressure photo-ionization (APPI) method permits the highly sensitive analysis of low-polarity compounds.



## The Principals of APPI

Atmospheric pressure photo ionization (APPI) is an ionization method that ionizes samples with UV light. It achieves highly sensitive analysis of low-polarity compounds. The mobile phase and sample supplied by the pump are vaporized in the APCI probe by the nebulizer gas and heater. Subsequently, it will be ionized by UV light.

The Principals of APPI

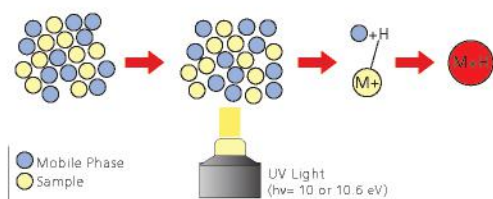


Shimadzu APPI Interface



## Direct APPI

If the sample ionization energy is lower than the photon energy, the target ions  $M^+$  ionized by the photons receive a photon from a solvent containing hydrogen to form  $(M+H)^+$ .



## Dopant APPI

Adding a dopant, which is a compound with lower ionization energy than the analyzed sample, can enhance the analysis sensitivity

