

protonated molecule

in mass spectrometry

An ion formed by interaction of a molecule with a proton abstracted from an ion, as often occurs in chemical ionization according to the reaction: $M + XH^+ \rightarrow MH^+ + X$. The symbolism $[M + H]^+$ may also be used to represent the protonated molecule. The widely used term 'protonated molecular ion' to describe the MH^+ ion is not recommended, since it suggests an associated product of a proton with a molecular ion.

Source:

PAC, 1991, 63, 1541 (*Recommendations for nomenclature and symbolism for mass spectroscopy (including an appendix of terms used in vacuum technology)*). (*Recommendations 1991*) on page 1550