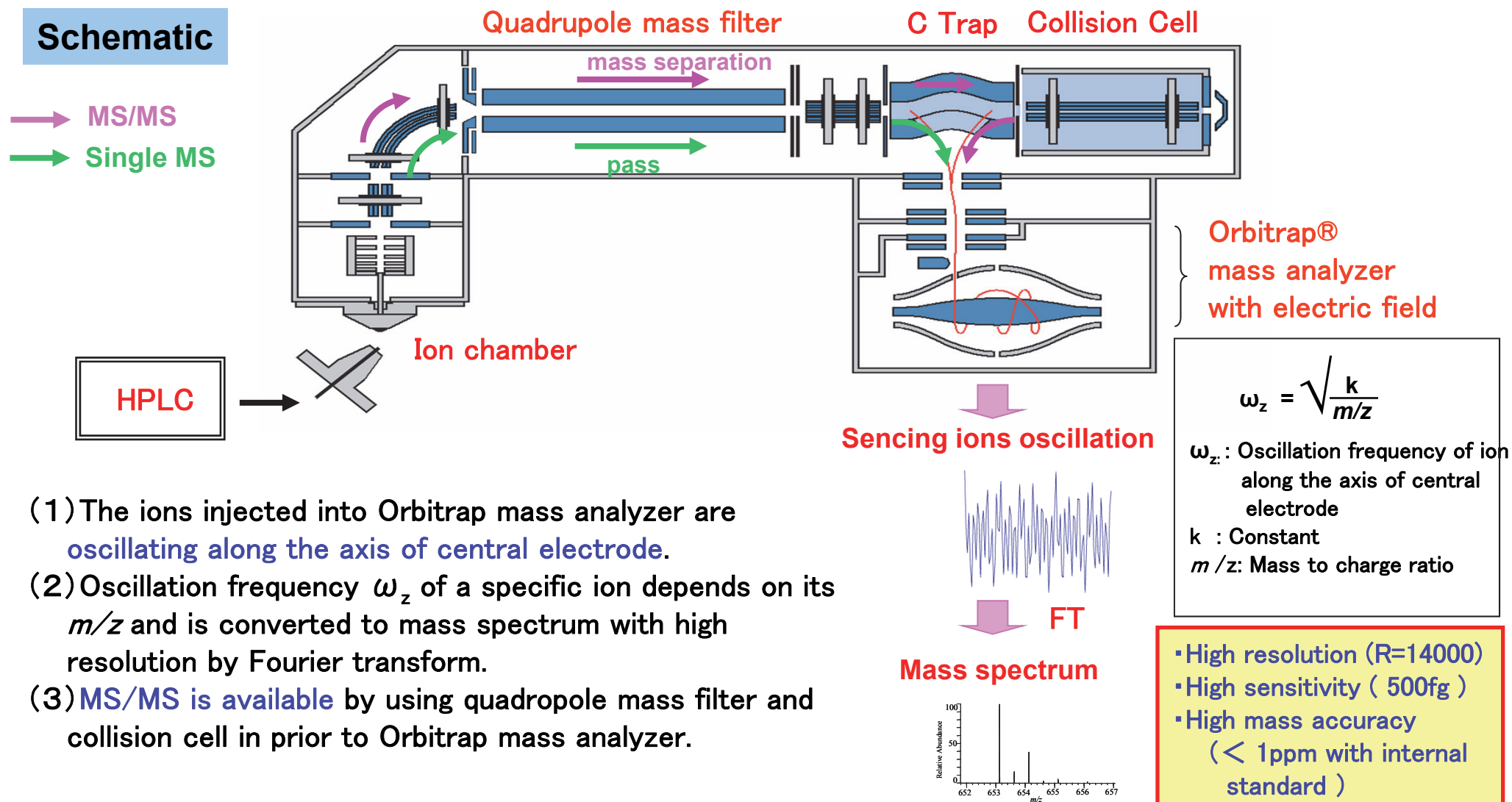


High resolution LC/FTMS

Schematic

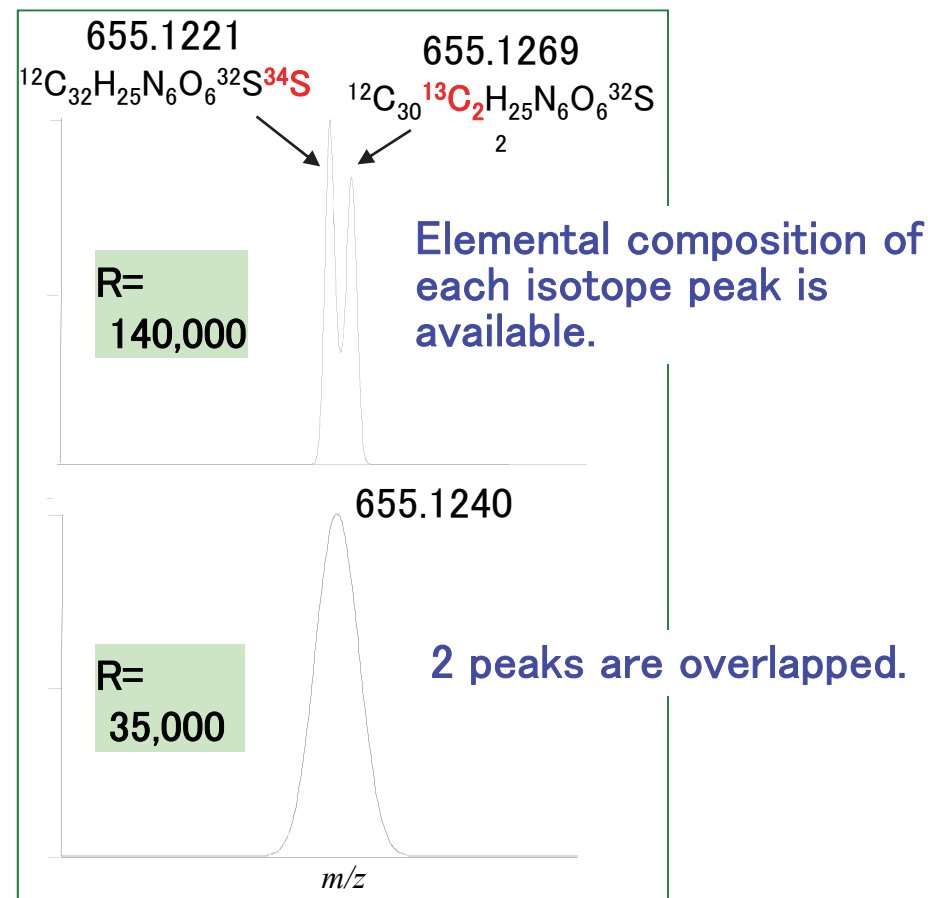
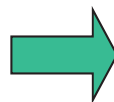
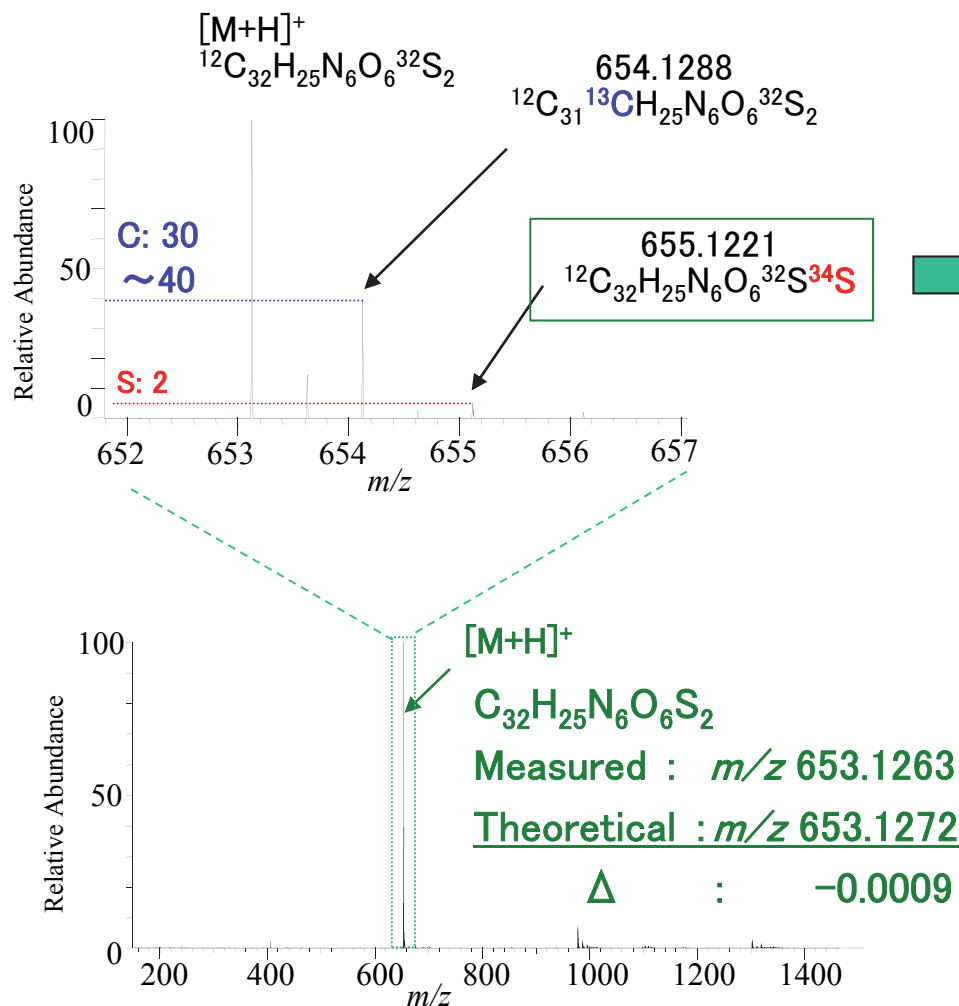


- (1) The ions injected into Orbitrap mass analyzer are **oscillating along the axis of central electrode**.
- (2) Oscillation frequency ω_z of a specific ion depends on its m/z and is converted to mass spectrum with high resolution by Fourier transform.
- (3) **MS/MS is available** by using quadrupole mass filter and collision cell in prior to Orbitrap mass analyzer.

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Elemental composition analysis of dye by LC/FTMS

<Isotope pattern of $[M+H]^+$ (enlarged)>

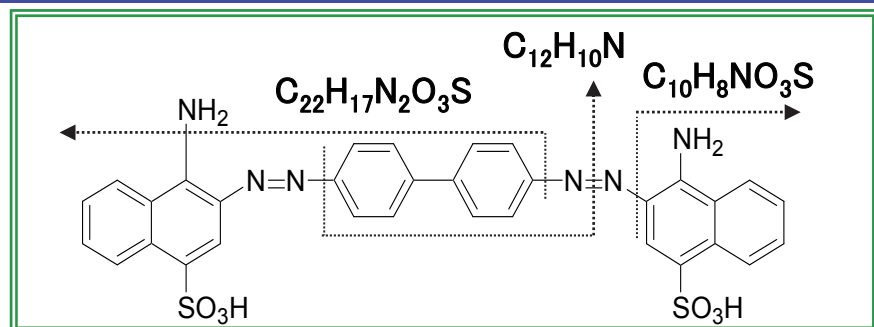


Elemental composition of $[M+H]^+$ ion of trace sample (ppm level) is obtained by exact mass analysis of FTMS.

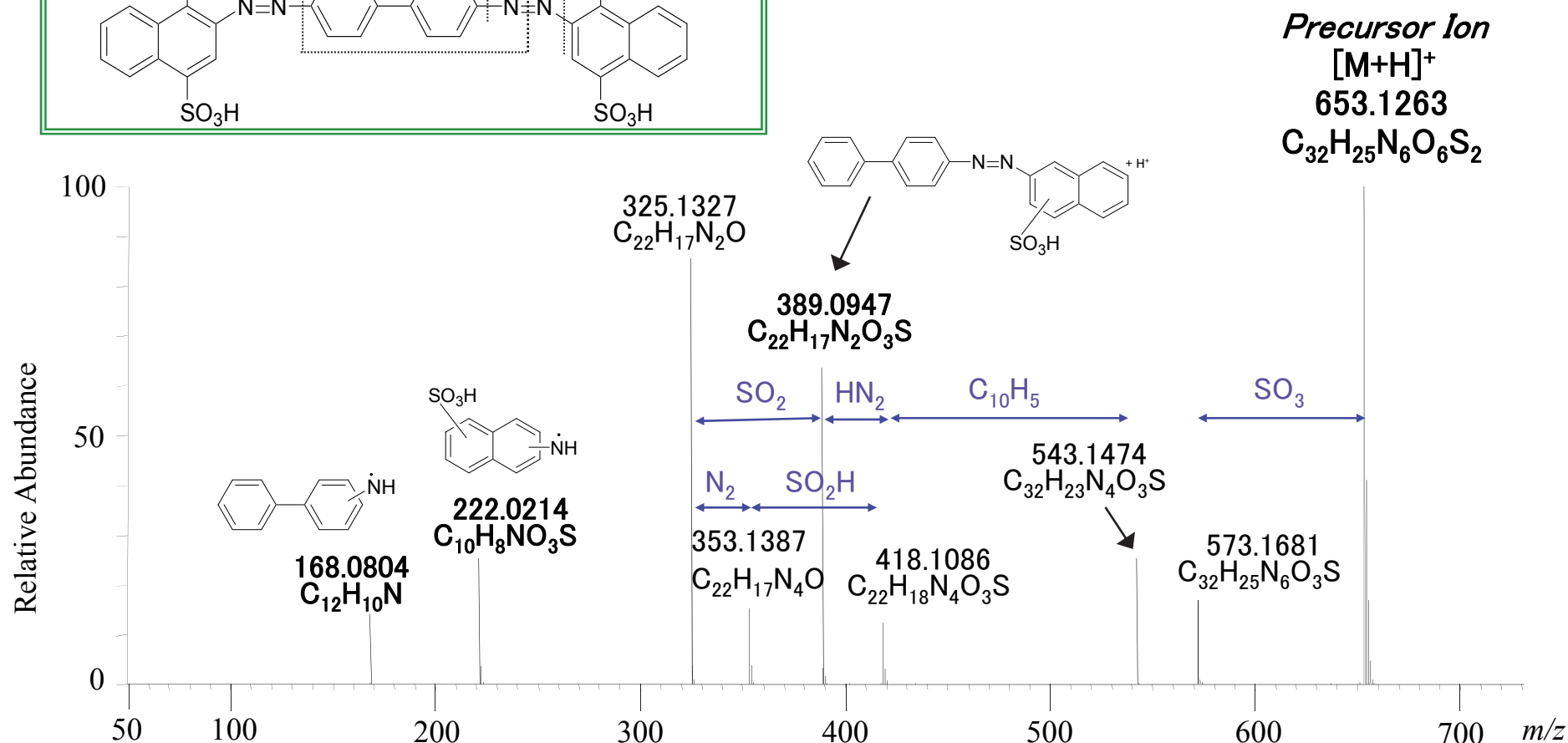
High Resolution mass spectrum of Dye (ESI-Positive)

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Structure estimation of dye from MS/MS spectrum



Partial structures of dye are estimated from elemental composition of each product ions.



Product ion spectrum from $[M+H]^+$ (m/z 653.1263)

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