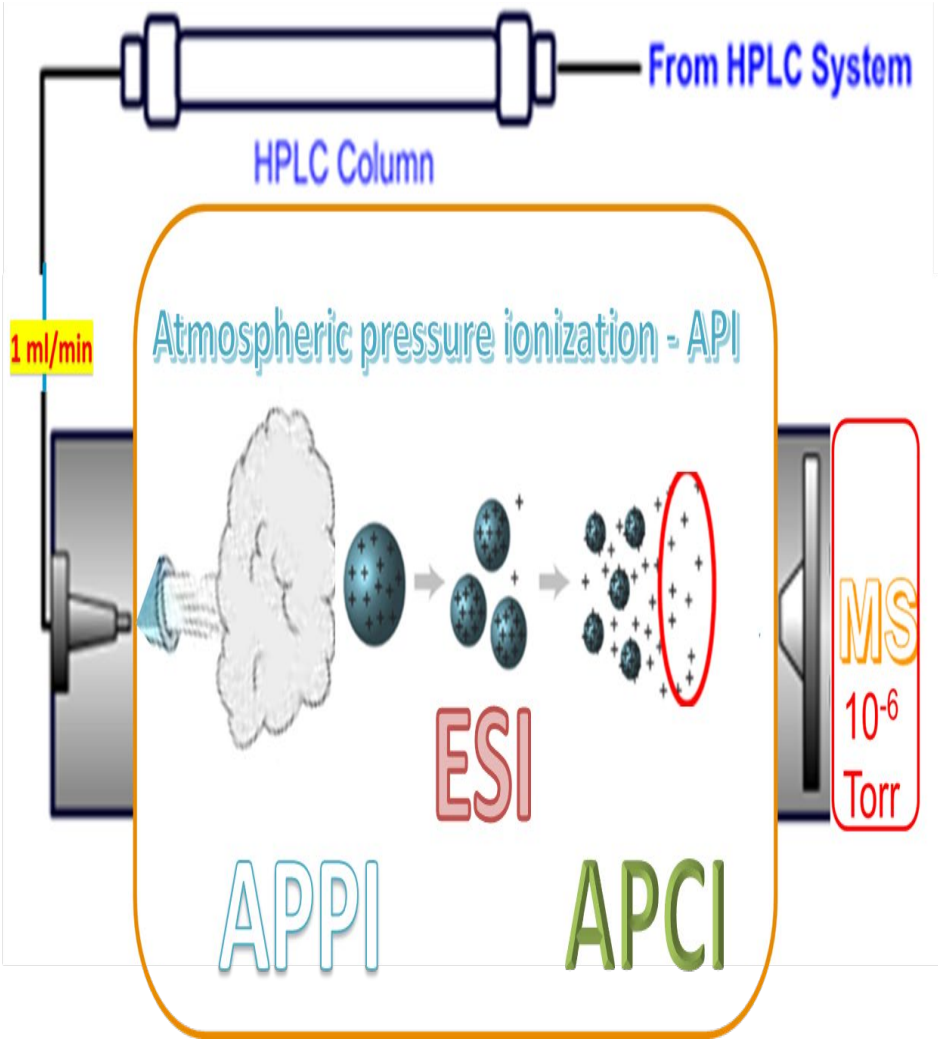
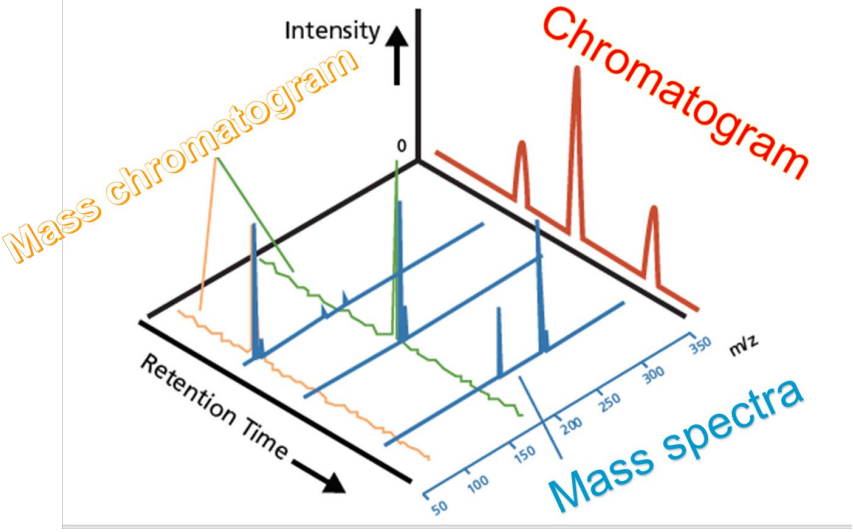
Practical LC-MS/MS method development





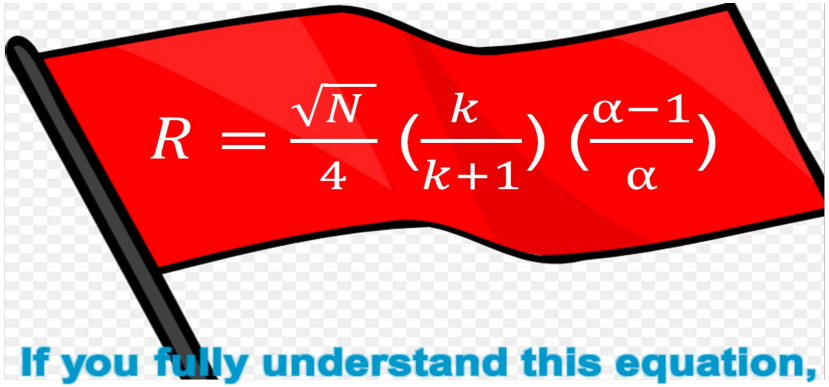
Quadrupole

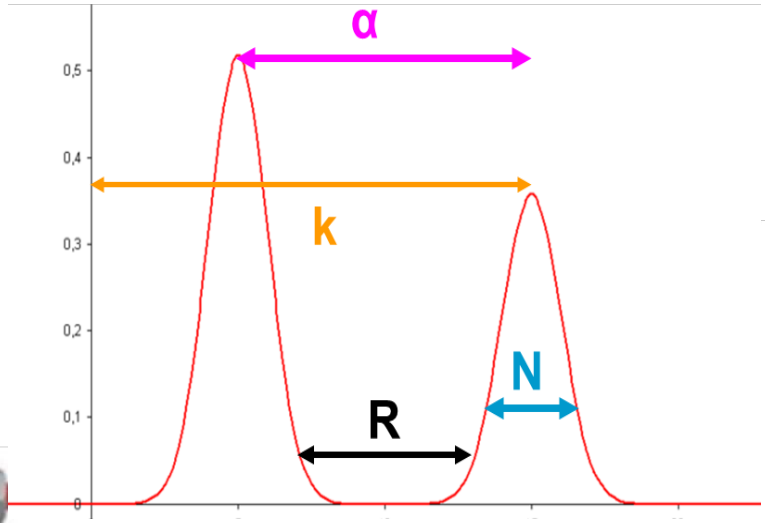
TOF

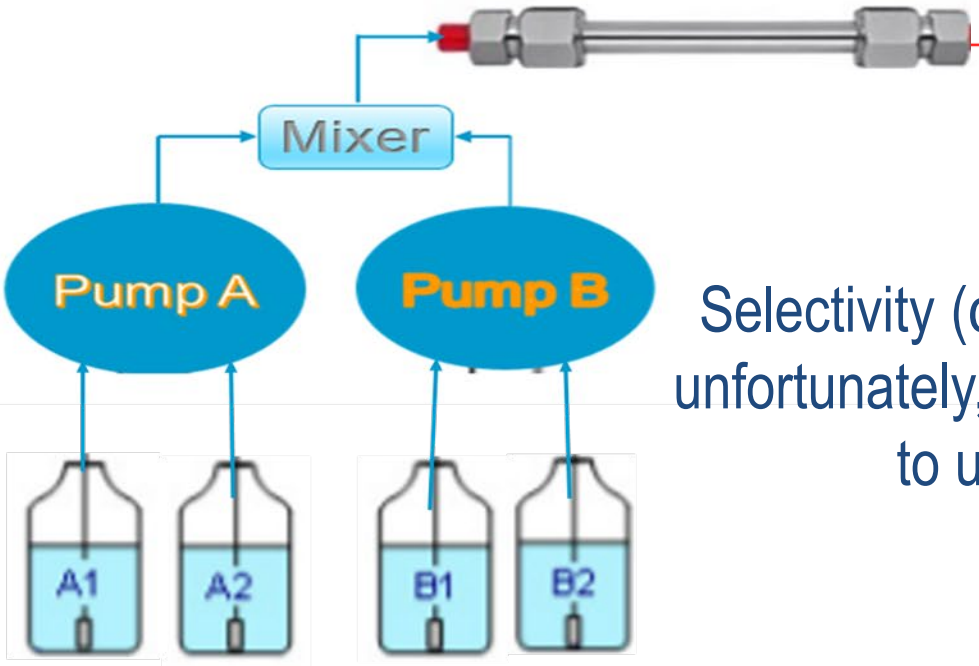
Ion trap

Orbitrap

Practical LC-MS/MS method development



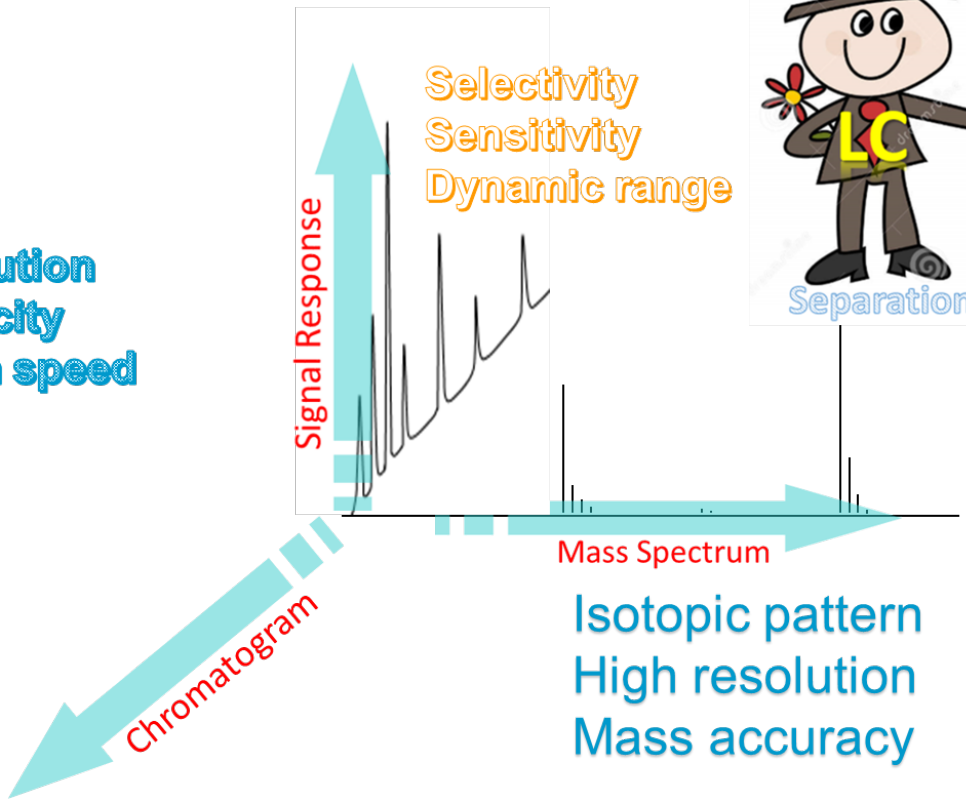


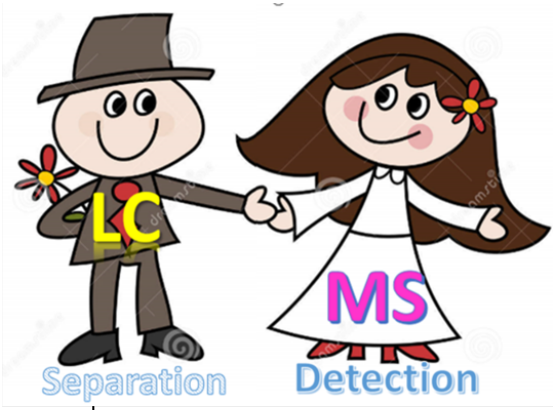


Selectivity (α) impacts the separation most!
unfortunately, it is the most difficult parameter to understand and predict.

Practical LC-MS/MS method development

High resolution
Peak capacity
Separation speed

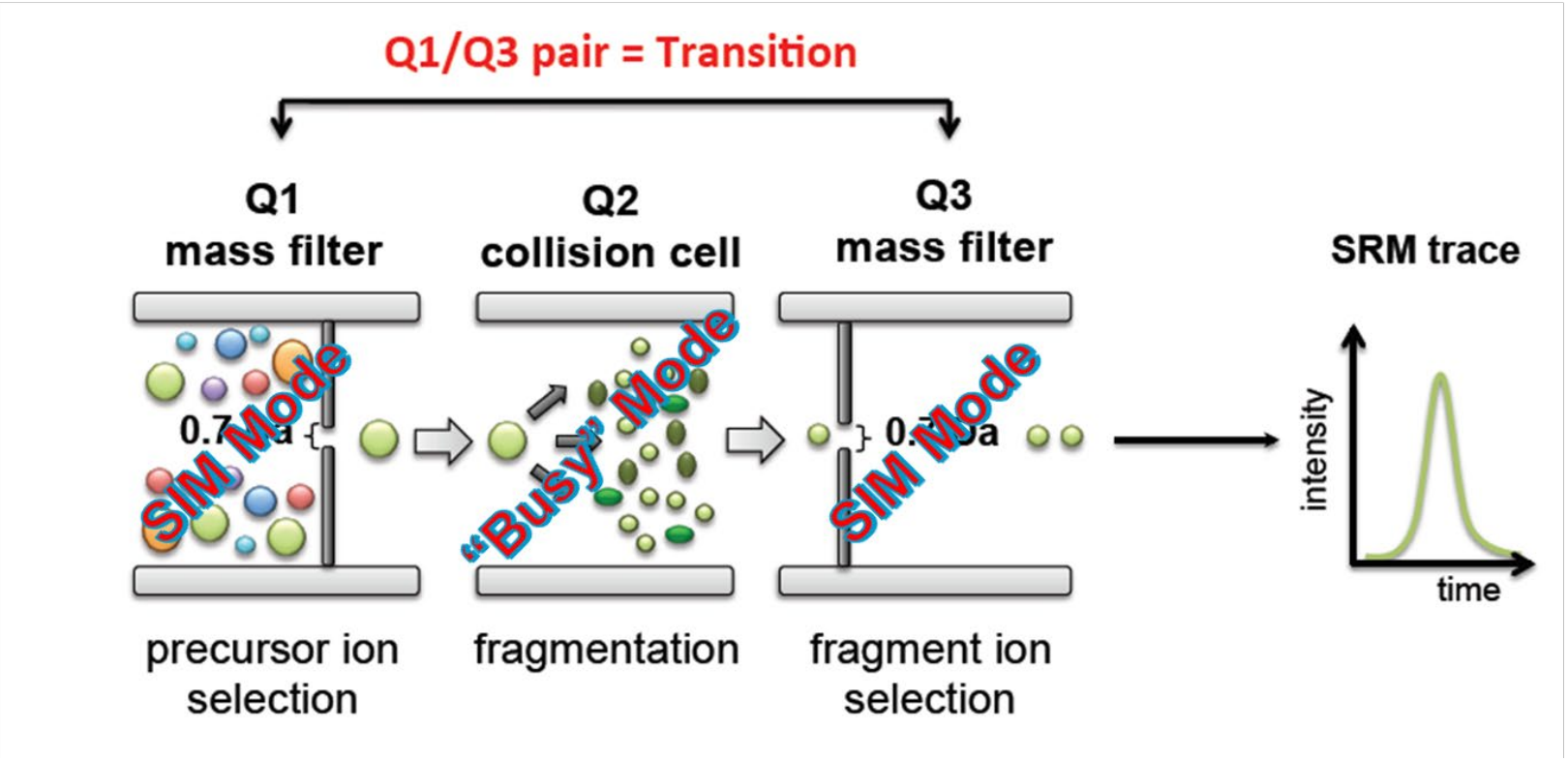




Combination of LC with MS – a perfect marriage

Practical LC-MS/MS method development

What are Q1, Q2 and Q3 doing in an MS/MS transition?



Practical LC-MS/MS method development

SRM method design strategy - **balance**

Goal: Achieve the highest sensitivity at a high quantitative accuracy with as many analytes as possible!

Best sensitivity
Rule of thumb: Typical dwell times are between 10 ms and 100 ms

High quantitative accuracy
Rule of thumb: At least 8 data points over the peak are required (typically cycle times between 1.5 s and 3.5 s)