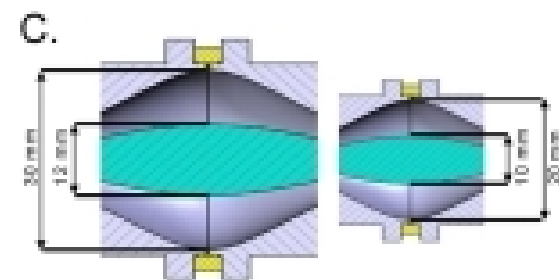
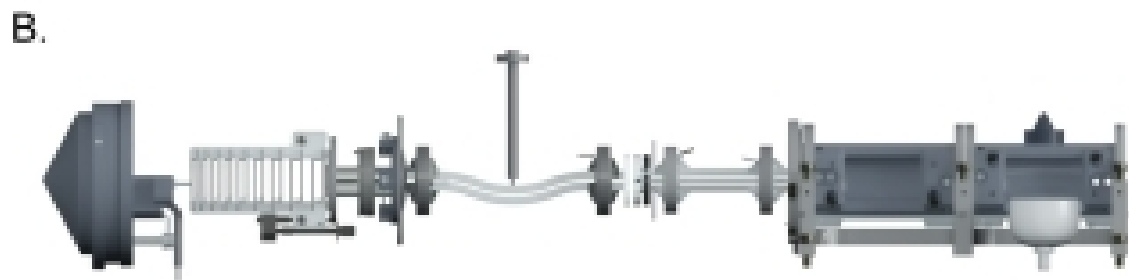
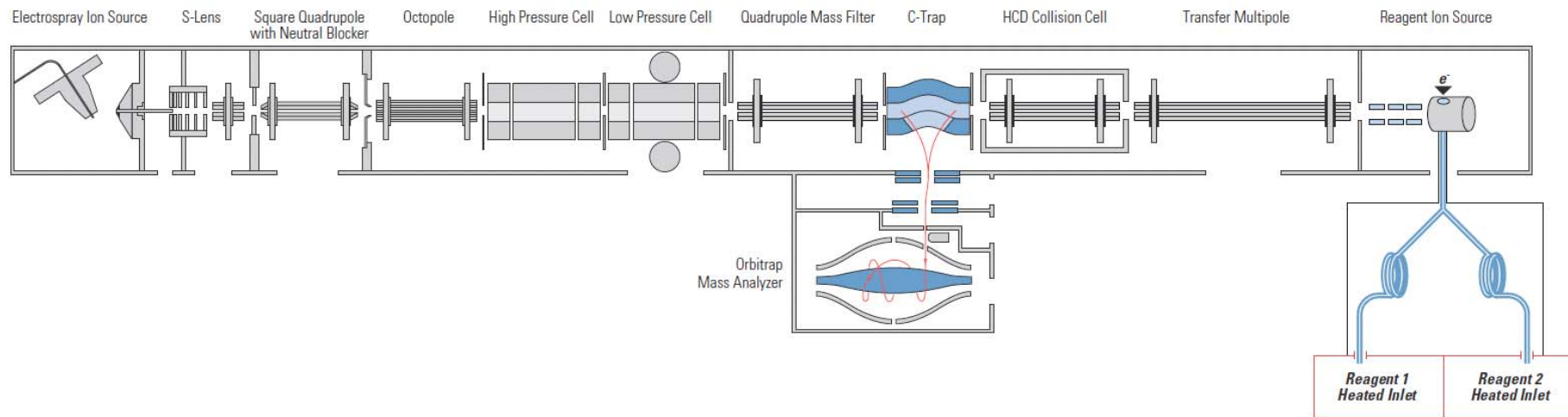
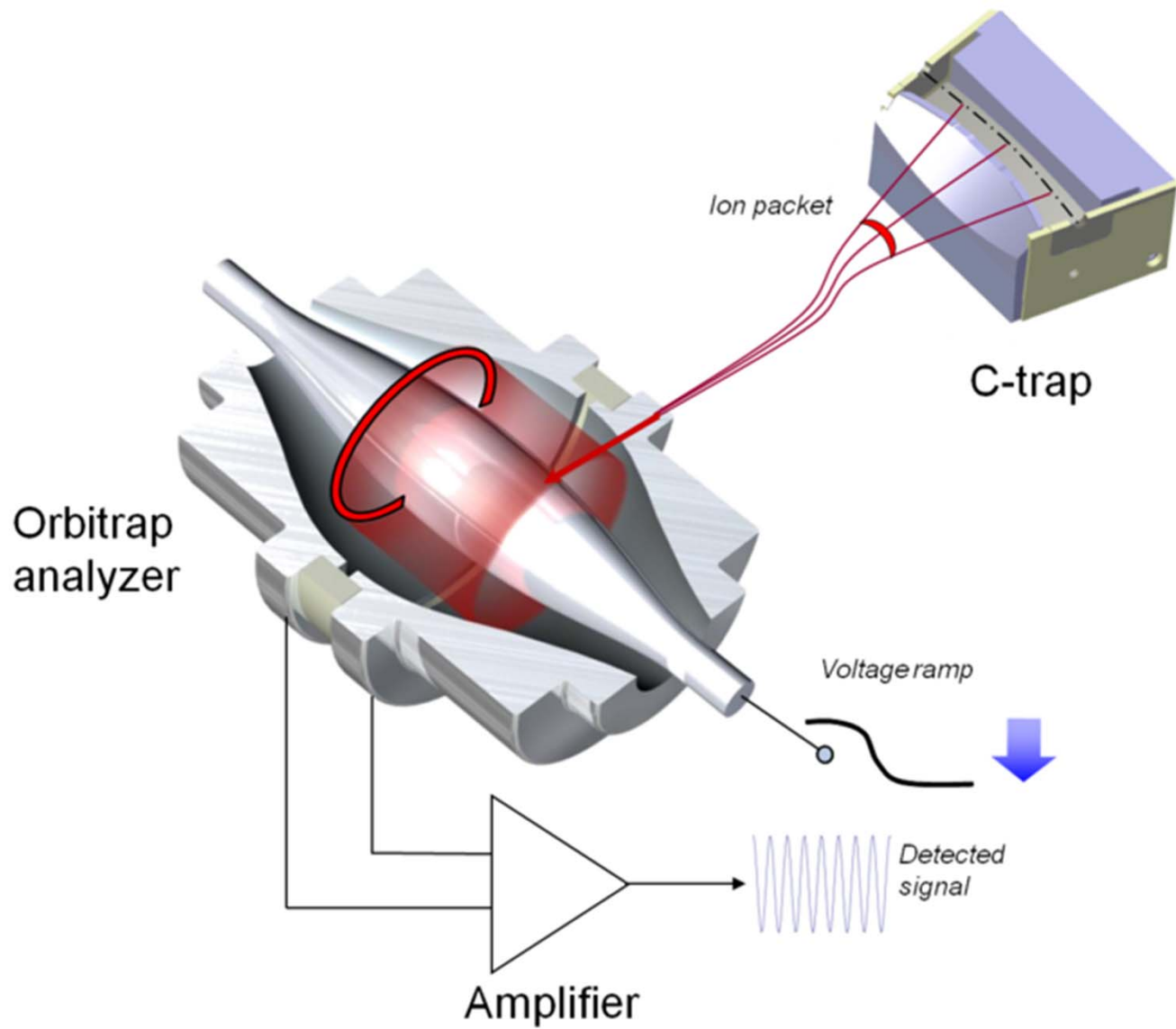
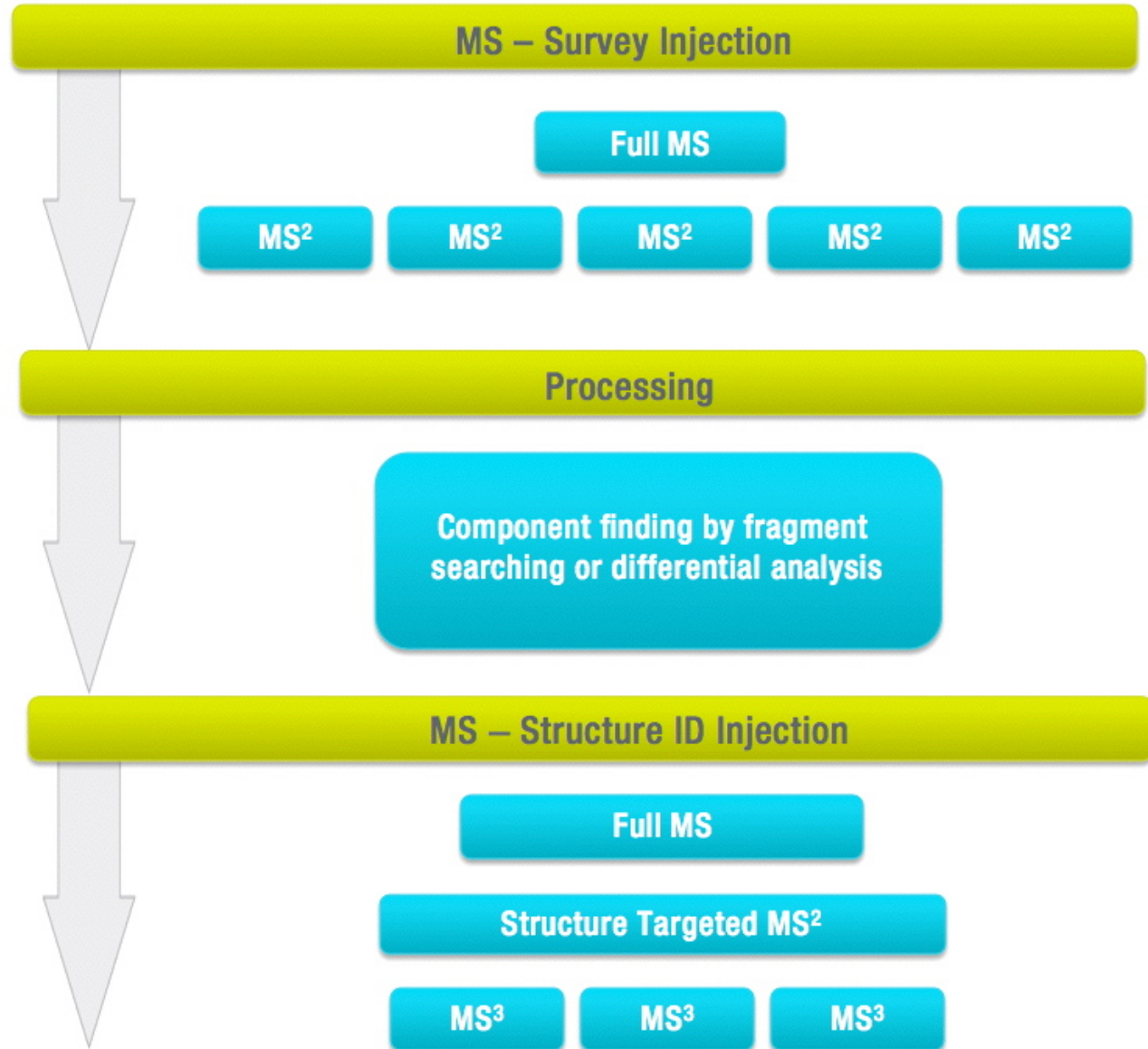


A. more robust interface optics faster dual trap electronics: > 12 scans/s
+ higher dynamic range detection system



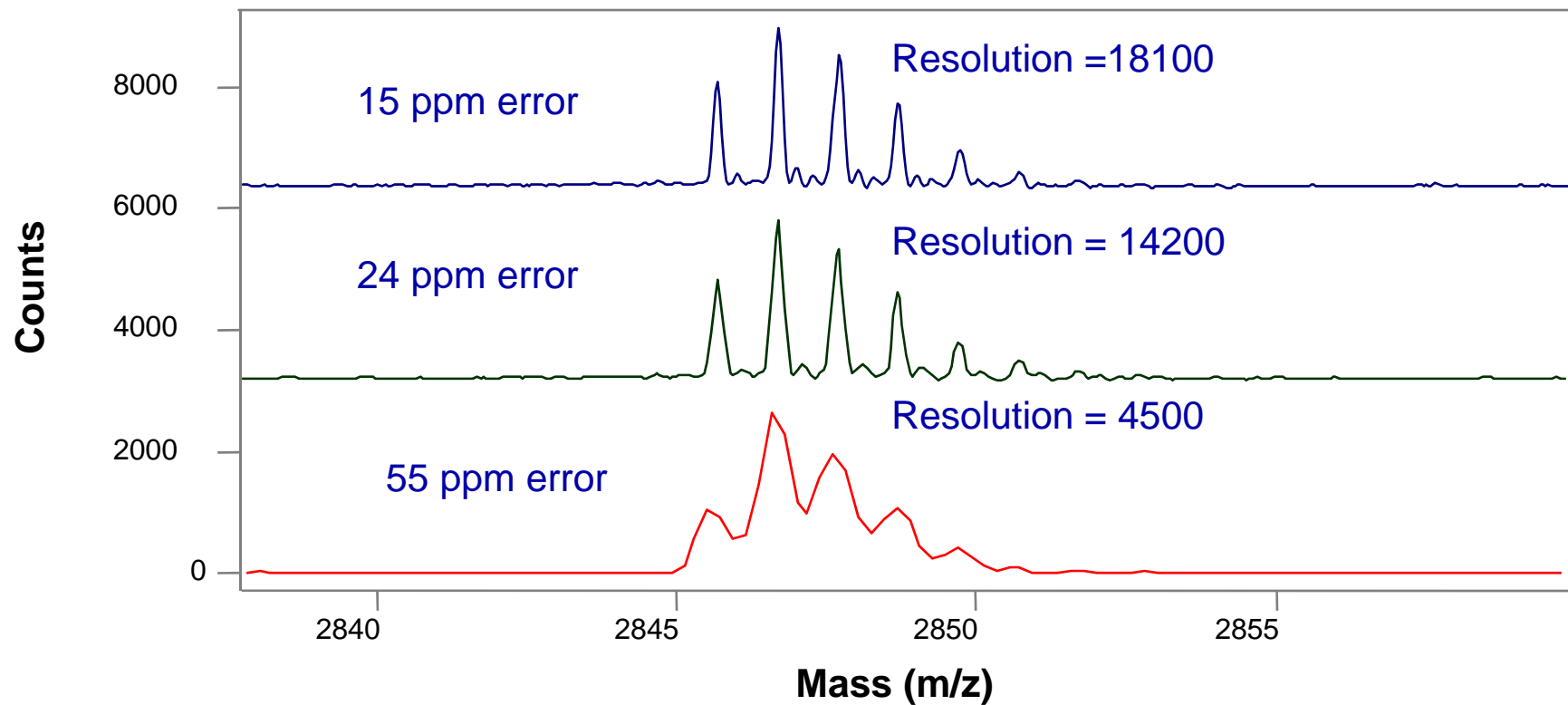
$$\omega = \sqrt{\frac{Z}{M}} k$$



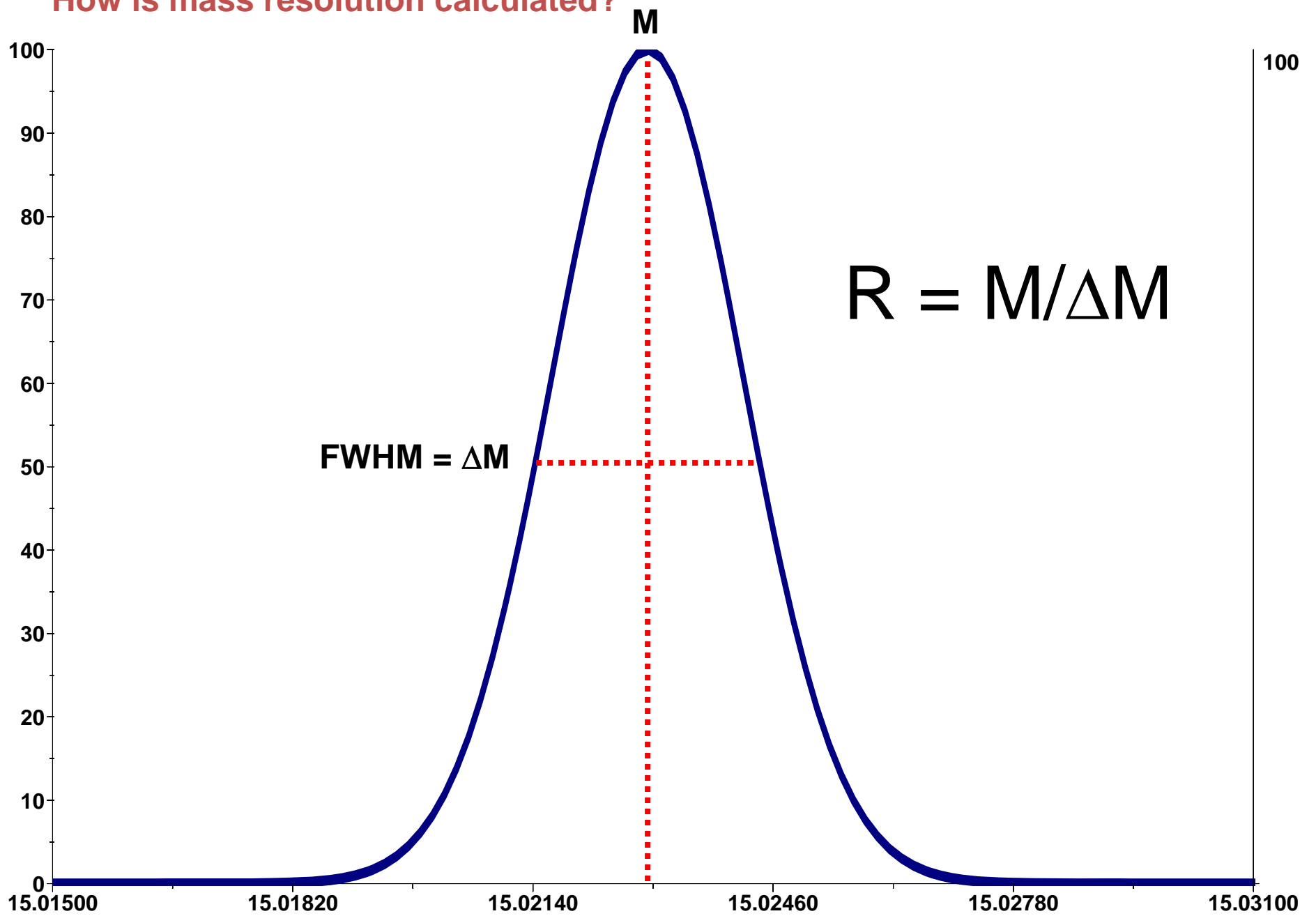


Mass measurement accuracy depends on resolution

High resolution means better mass accuracy



How is mass resolution calculated?



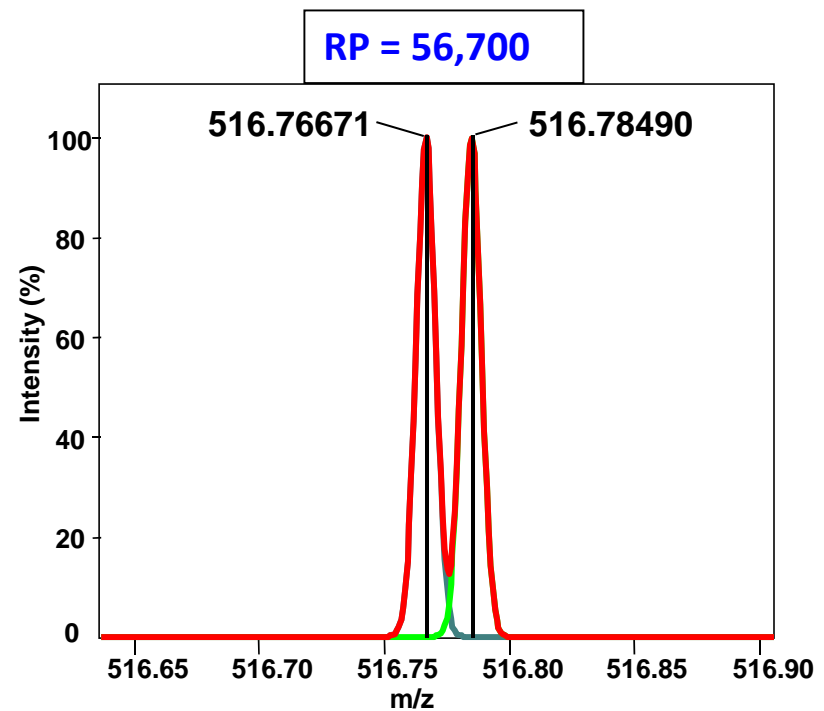
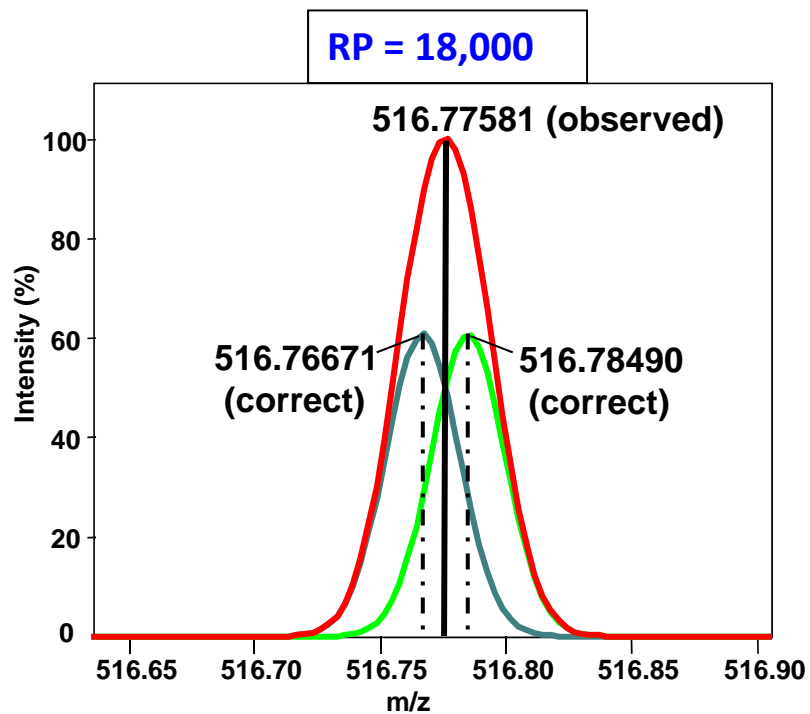
Peptide mixture: [Val⁵]-Angiotensin II Lys-des-Arg⁹-Bradykinin

Sequence: DRVYVHPF KRPPGFSPF

Formula: C₄₉H₆₉N₁₃O₁₂ C₅₀H₇₃N₁₃O₁₁

Exact mass: [M+2H]²⁺ = 516.76671 [M+2H]²⁺ = 516.78490

Δm (mmu): 18.2 mmu



	Theoretical Mass	Delta [ppm]	Delta [mmu]	RDB	Composition
1 ppm (4)	516.76671	0.0	0.0	21.0	C ₄₉ H ₇₁ O ₁₂ N ₁₃
	516.76647	0.5	0.2	15.0	C ₄₉ H ₇₉ O ₁₁ N ₉ S ₂
	516.76638	0.6	0.3	12.0	C ₄₁ H ₇₅ O ₁₄ N ₁₅ S ₁
	516.76705	-0.7	-0.3	11.5	C ₄₃ H ₇₇ O ₁₅ N ₁₂ S ₁
2 ppm (10)	516.76604	1.3	0.7	16.0	C ₄₈ H ₇₅ O ₁₆ N ₉
	516.76738	-1.3	-0.7	20.5	C ₅₁ H ₇₃ O ₁₃ N ₁₀
	516.76604	1.3	0.7	21.5	C ₄₇ H ₆₉ O ₁₁ N ₁₆
	516.76580	1.8	0.9	15.5	C ₄₇ H ₇₇ O ₁₀ N ₁₂ S ₂
	516.76772	-2.0	-1.0	16.5	C ₄₄ H ₇₃ O ₁₁ N ₁₆ S ₁
	516.76773	-2.0	-1.0	11.0	C ₄₅ H ₇₉ O ₁₆ N ₉ S ₁
5 ppm (23)	516.76805	-2.6	-1.3	25.5	C ₅₂ H ₆₉ O ₉ N ₁₄
	516.76537	2.6	1.3	16.5	C ₄₆ H ₇₃ O ₁₅ N ₁₂
	516.76807	-2.6	-1.4	7.0	C ₃₈ H ₇₉ O ₁₄ N ₁₅ S ₂
	516.76513	3.0	1.6	10.5	C ₄₆ H ₈₁ O ₁₄ N ₈ S ₂
	516.76513	3.1	1.6	16.0	C ₄₅ H ₇₅ O ₉ N ₁₅ S ₂
	516.76839	-3.3	-1.7	16.0	C ₄₆ H ₇₅ O ₁₂ N ₁₃ S ₁
	516.76479	3.7	1.9	20.0	C ₅₂ H ₇₅ O ₁₁ N ₉ S ₁
	516.76872	-3.9	-2.0	25.0	C ₅₄ H ₇₁ O ₁₀ N ₁₁
	516.76470	3.9	2.0	17.0	C ₄₄ H ₇₁ O ₁₄ N ₁₅
	516.76874	-3.9	-2.0	6.5	C ₄₀ H ₈₁ O ₁₅ N ₁₂ S ₂
	516.76446	4.3	2.2	11.0	C ₄₄ H ₇₉ O ₁₃ N ₁₁ S ₂
	516.76897	-4.4	-2.3	12.5	C ₄₀ H ₇₃ O ₁₆ N ₁₆
	516.76907	-4.6	-2.4	15.5	C ₄₈ H ₇₇ O ₁₃ N ₁₀ S ₁