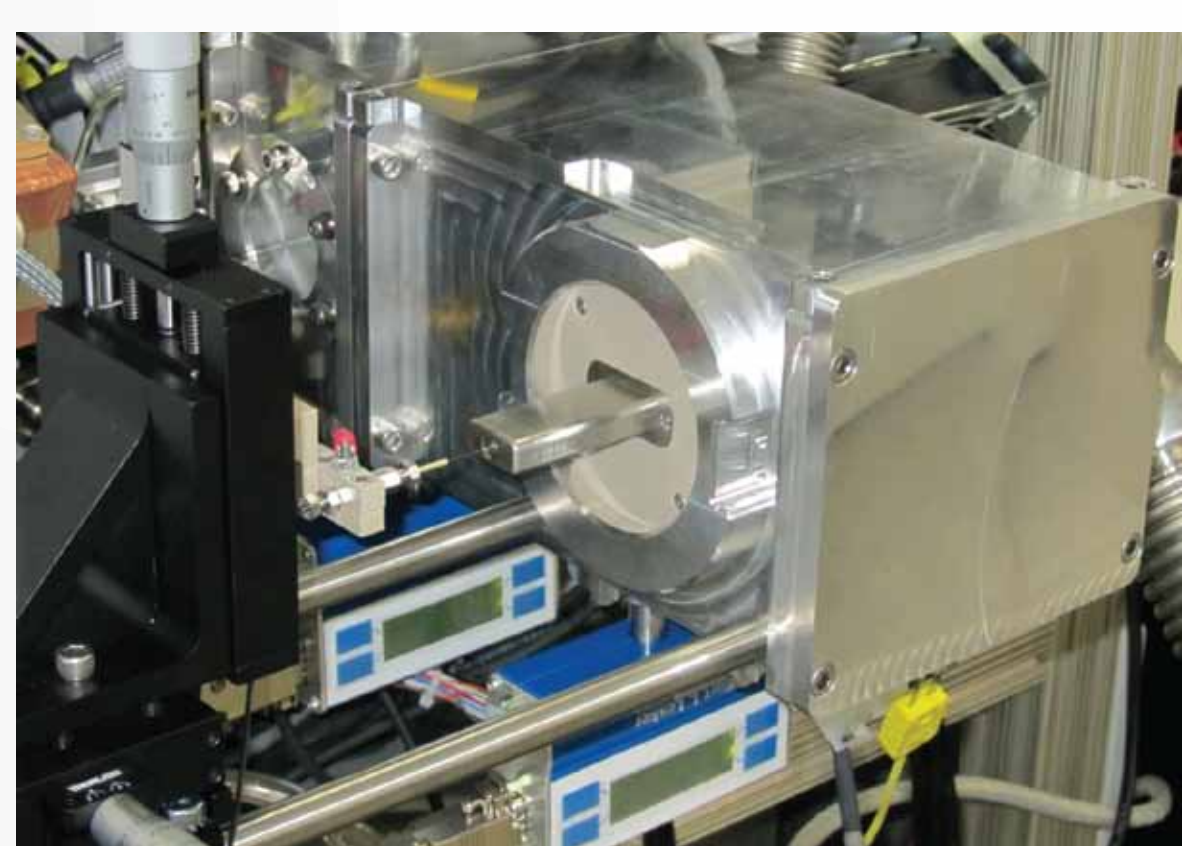


IFT Injector Interface for Mass Spectrometers

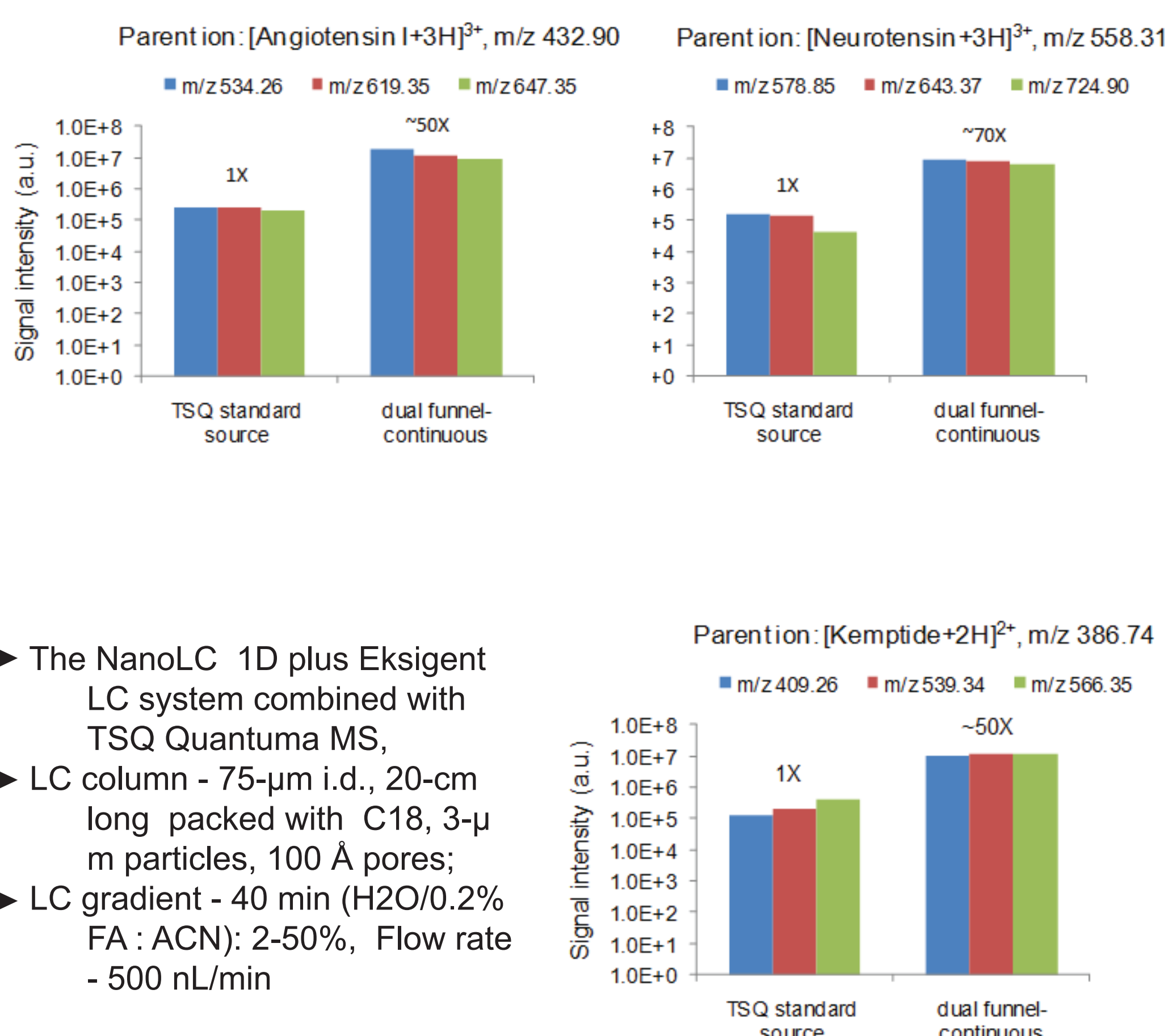


IFT Injector interface coupled to a LECO's HRTOF



IFT Injector interface coupled to a Thermo's Orbitrap

IMPROVED SENSITIVITY IN LC-MRM ANALYSIS OF PEPTIDES FROM HIGHLY COMPLEX BACTERIAL PROTEOME



- ▶ The NanoLC 1D plus Eksigent LC system combined with TSQ Quantuma MS,
- ▶ LC column - 75- μ m i.d., 20-cm long packed with C18, 3- μ m particles, 100 Å pores;
- ▶ LC gradient - 40 min (H₂O/0.2% FA : ACN): 2-50%, Flow rate - 500 nL/min

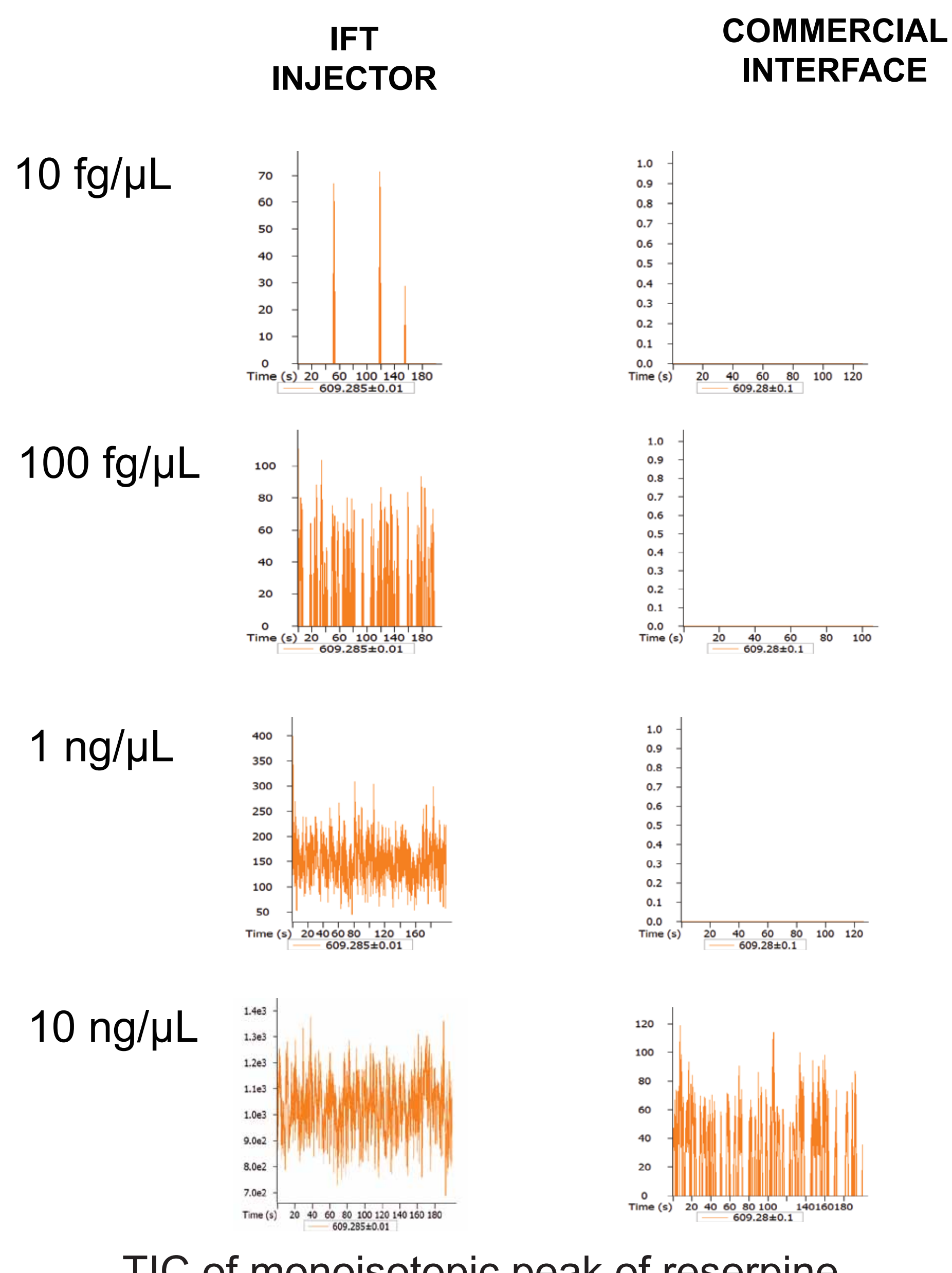
Benefits:

- ▶ 20- to 100-fold higher sensitivity
- ▶ 5-fold less chemical noise
- ▶ Stable robust operation

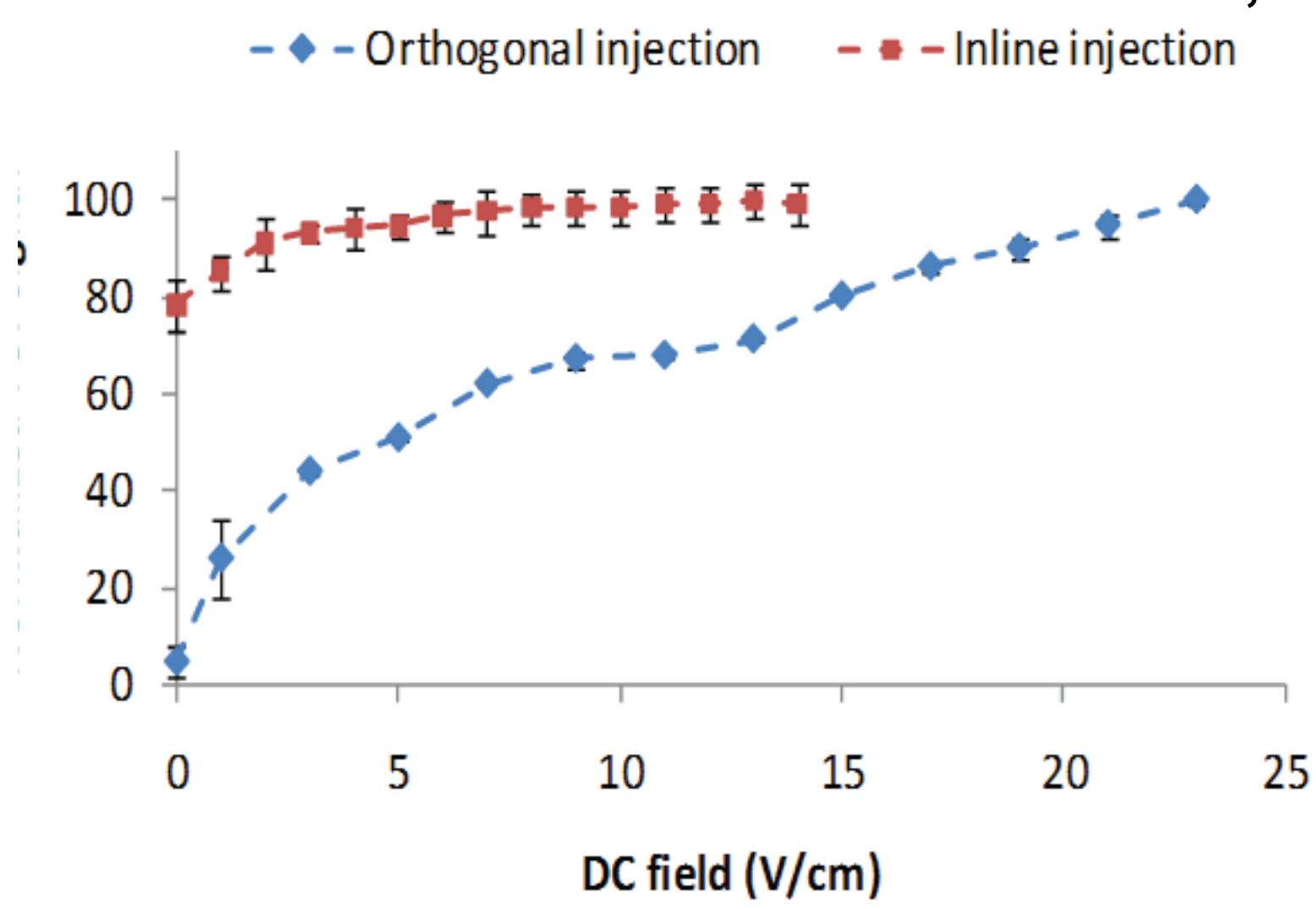
Features:

- ▶ Orthogonal injection into the RF field eliminates/dramatically reduces instrument contamination
- ▶ Typical improvement in the limit of detection varies from 5X to 100X, depending on the mass spectrometer design
- ▶ Interface is compatible with any mass spectrometer
- ▶ Coefficient of variance is less than 10% in LC-MS analyses of complex samples
- ▶ Full programmatic control, turn-key device amenable to custom-engineering

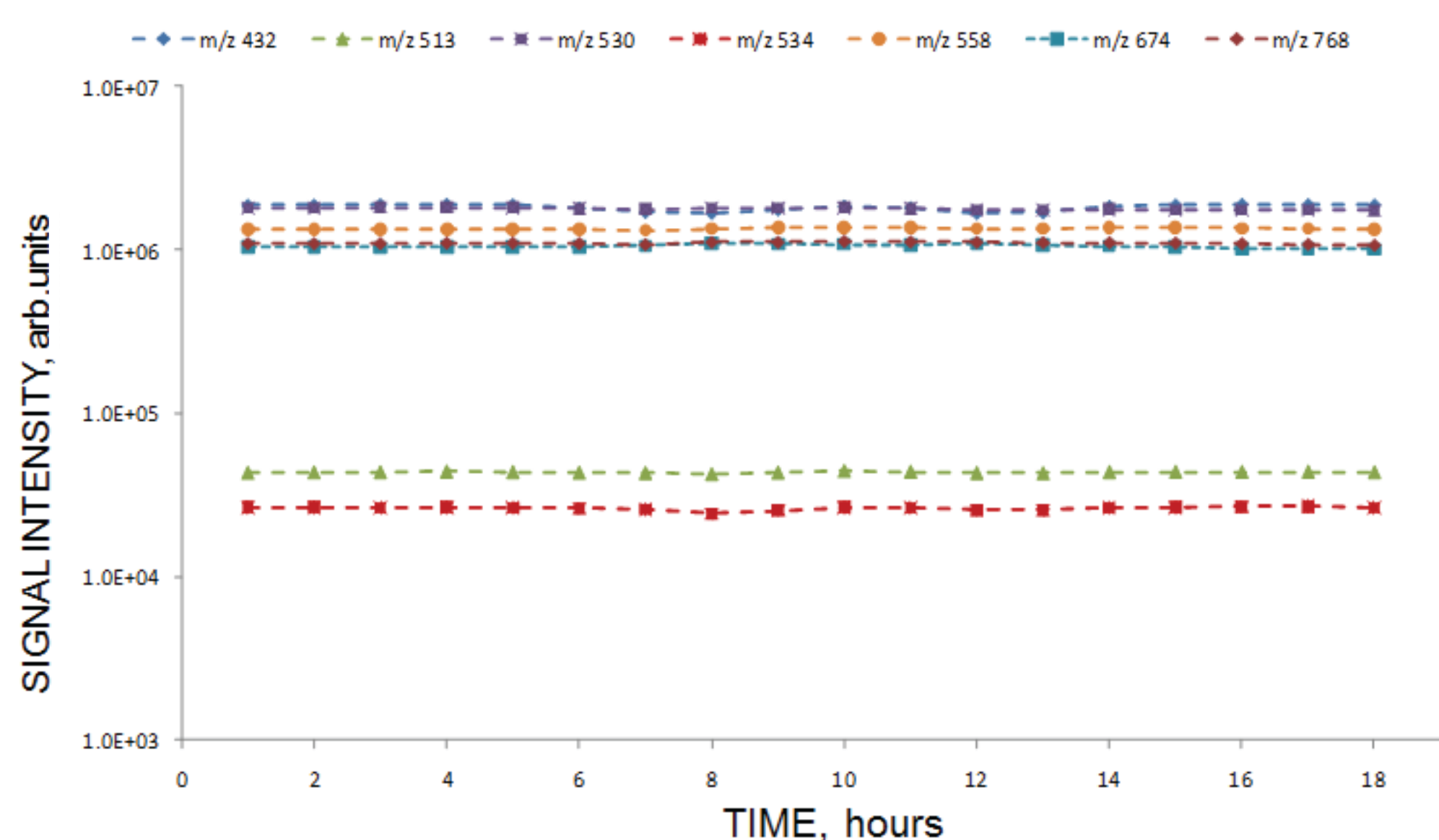
LIMIT OF DETECTION WITH A COMMERCIAL TOFMS USING DIRECT INFUSION OF RESERPINE



COMPARISON WITH INLINE ION INJECTION, TOFMS



REPRODUCIBILITY, TOFMS



Signal intensity versus time for seven peptides at 1 μ M concentration, direct ESI infusion for 18 hours