

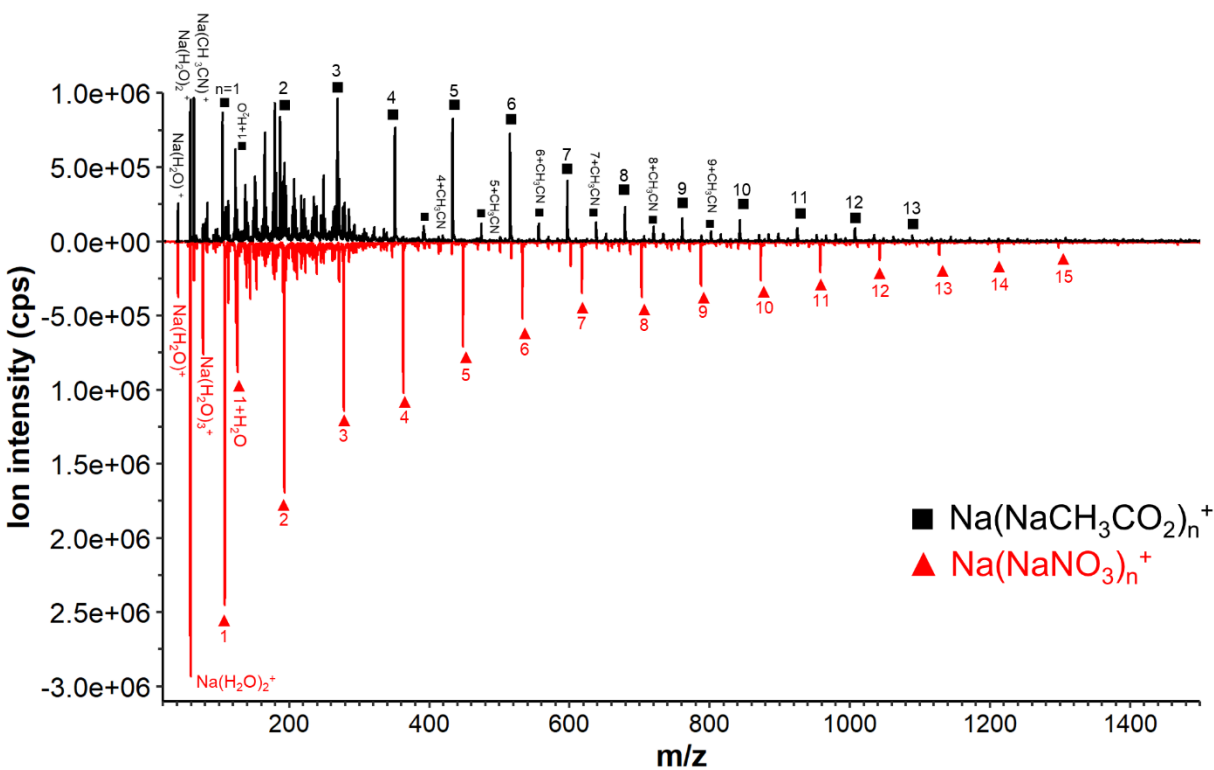
## Electronic Supplementary Information

### Fluorine-Selective Post-Plasma Chemical Ionization for Enhanced Elemental Detection of Fluorochemicals

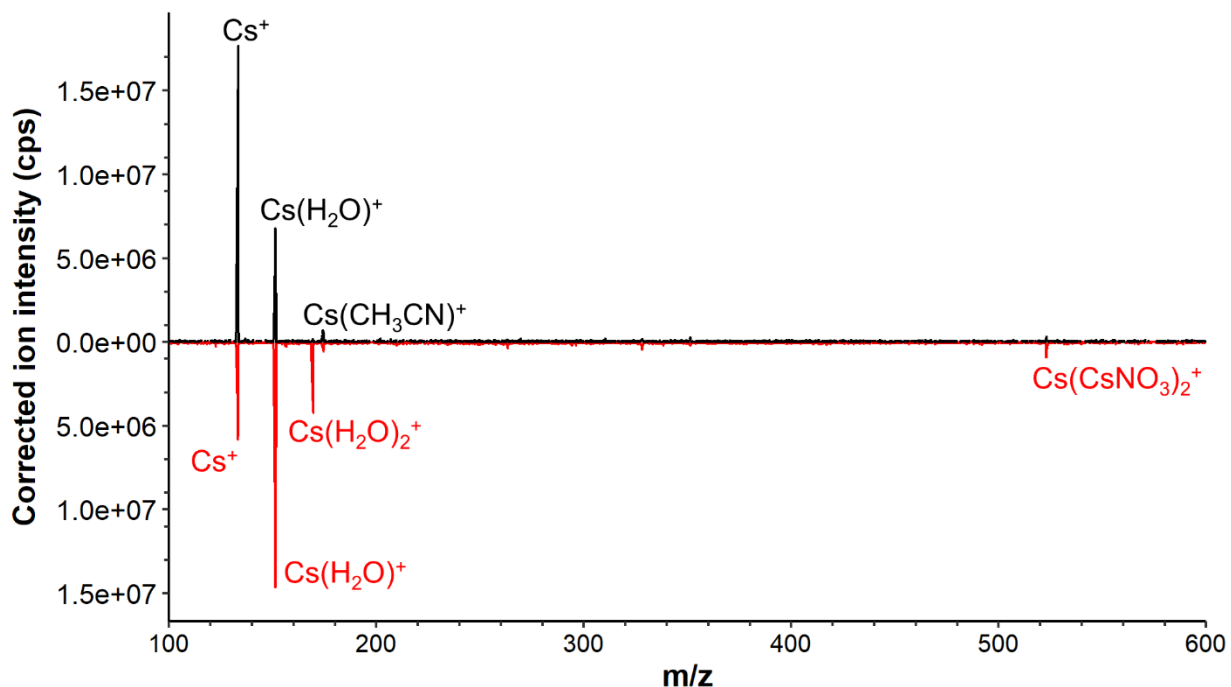
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**Figure S1.** (Black) Nanospray of 10 mM  $\text{NaCH}_3\text{CO}_2$  with the interface flushed using air (5.6 L/min) to block plasma sampling into the first chamber. (Red) Inverted spectrum from the same nanospray with the air flow into the interface lowered to 2.6 L/min to sample the plasma.  $\text{O}_2$  flow rate into the plasma was set to 50 mL/min and background scans were acquired with a scan time of 3 seconds for both spectra.



**Figure S2.** (Black) Nanospray of 100  $\mu\text{M}$   $\text{CsNO}_3$  with the interface flushed using air (5.6 L/min) to block plasma sampling into the first chamber. (Red) Inverted spectrum from the same nanospray with the air flow into the interface lowered to 2.6 L/min to sample the plasma.  $\text{O}_2$  flow rate into the plasma was set to 50 mL/min and background scans were acquired with a scan time of 3 seconds for both spectra.

The total intensity of all cesium-containing ions without plasma sampling (observed at air flow rate of 5.6 L/min) is  $1.4 \times 10^8 \pm 7 \times 10^6$  cps compared to the total intensity of  $1.4 \times 10^8 \pm 1 \times 10^7$  cps with plasma sampling (observed at air flow rate of 2.6 L/min). The absence of a reduction in total ion intensity suggests that neutralization of nanospray ions does not occur upon plasma sampling and that the presence of negative ions is negligible.