

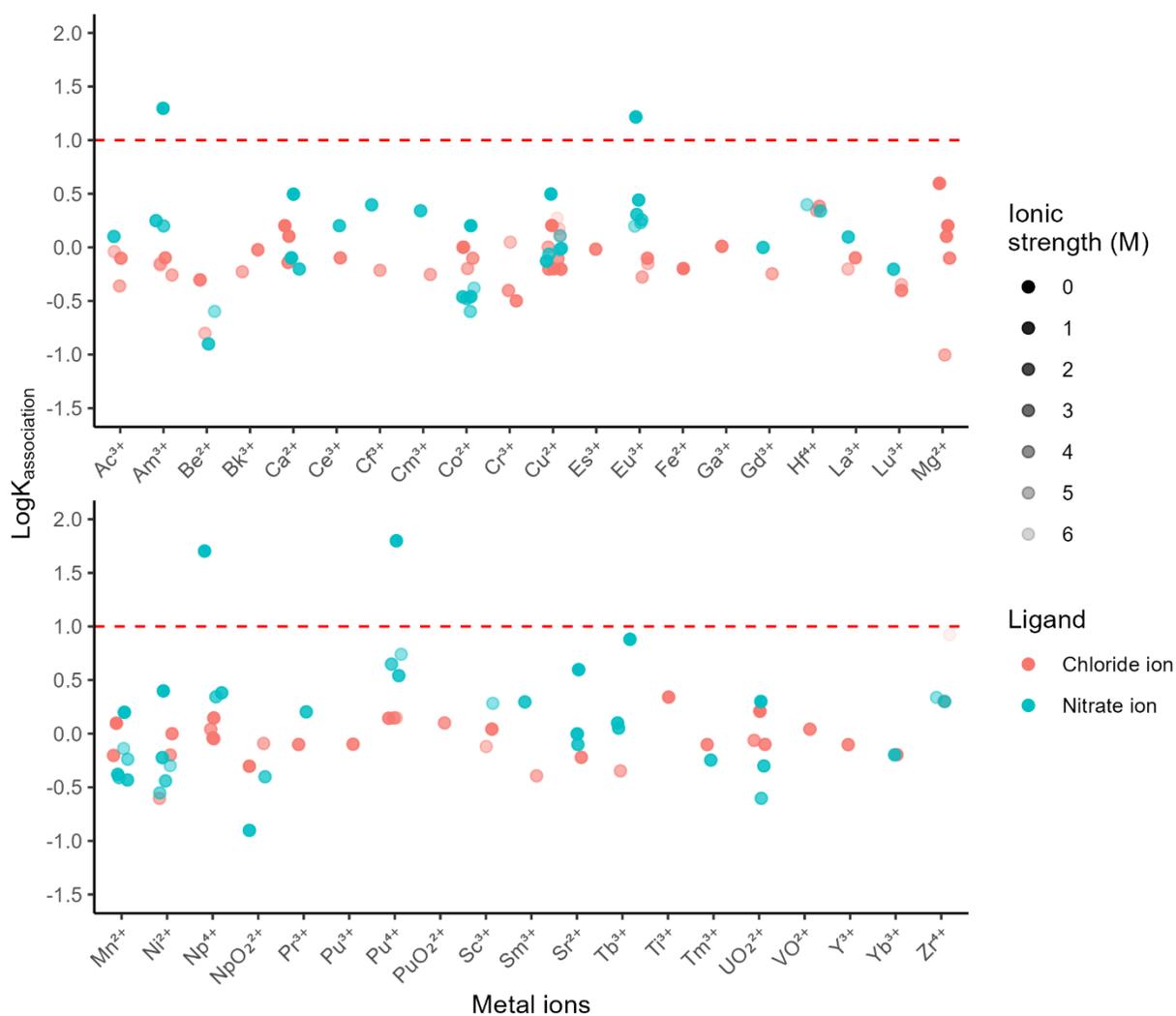
## Supporting information

# HCl-selective ionization reactions for improved Cl detection robustness in post-inductively coupled plasma chemical ionization

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**Figure S1.** First formation constants of chloro and nitrate complexes for metal ions with  $\text{Log}K_{\text{Cl}} < 1$ .  $\text{Log}K_{\text{Cl}}$  values are taken from References 1,2.

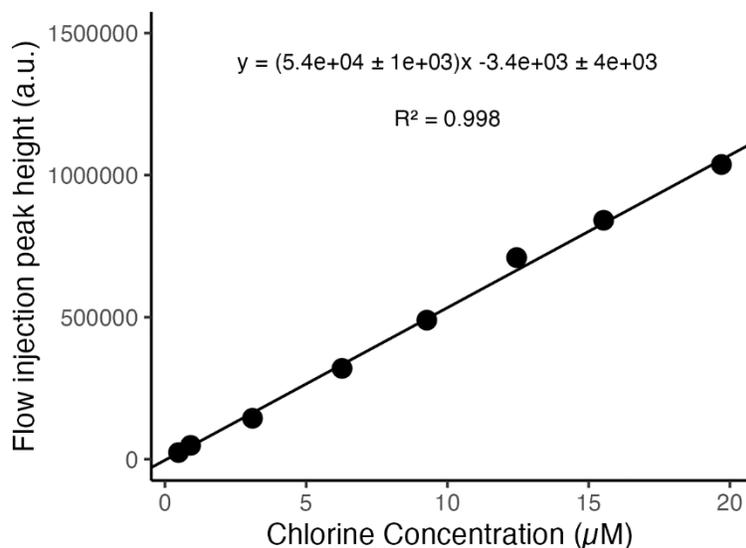


Figure S2. Calibration curve for Cl detection as  $\text{PbCl}^+$  using flow injection peak heights and chloramphenicol as analyte. Regression line is weighted by  $1/\text{peak height}$ .

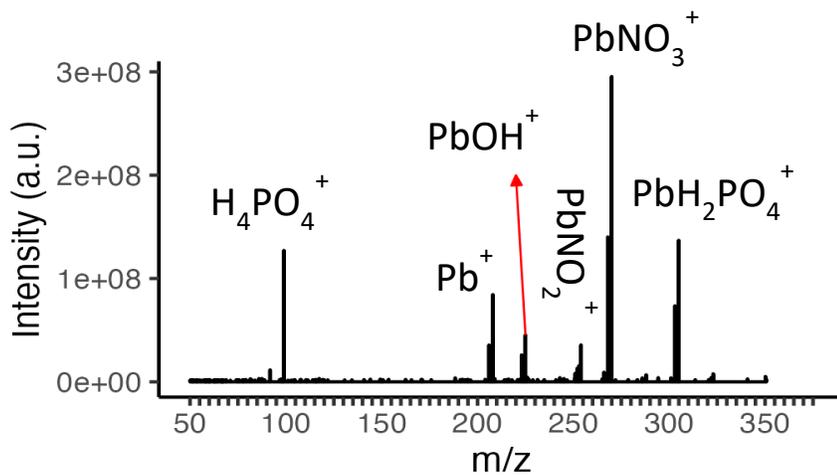


Figure S3. Pb-containing ions detected upon injection of  $500 \mu\text{M}$  glyphosate. CID for this experiment was set to 20 to decluster hydrated ions.

## References

- 1 Burgess, Donald, R., NIST SRD 46. Critically Selected Stability Constants of Metal Complexes: Version 8.0 for Windows, National Institute of Standards and Technology, 2004 DOI: 10.18434/M32154 (accessed 2025-11-13).
- 2 Hatada, Naoyuki, Stability Constant Explorer - Database of Stability Constants of Metal Complexes (version v1.1.2) <https://n-hatada.github.io/stability-constant-explorer/english.html> 2023.