

AnaLig® Materials for Specific Target Analytes: Inorganic Cations and Anions

Element Group	Element Species (Cation/Anion)
Group 1 metals	Li ⁺ , Na ⁺ , K ⁺ , Rb ⁺ , Cs ⁺
Group 2 metals	Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Ra ²⁺
Group 4 metals	Ti(IV), Zr(IV), Hf(IV)
Group 6 metals	Cr(VI) as chromate ion (CrO ₄ ²⁻) and dichromate ion (Cr ₂ O ₇ ²⁻); Mo(VI) as molybdate (MoO ₄ ²⁻) ion; W(VI) as tungstate (WO ₄ ²⁻) ion
Group 7 metals	Tc(VII) as pertechnetate ion (TcO ₄ ⁻); Re(VII) as perrhenate ion (ReO ₄ ⁻); Mn(VII) as permanganate ion (MnO ₄ ⁻)
Group 13 metals	Al ³⁺ , Ga ³⁺ , In ³⁺ , Tl ⁺ , Tl ³⁺
Group 14 metals	Sn(IV)
Group 15 elements	As(V), Sb(III), Bi(III)
Group 17 elements	Cl ⁻ , Br ⁻ , I ⁻ ; in addition, a single AnaLig® product is available that binds all three halides, with higher selectivities for Br ⁻ and I ⁻ than Cl ⁻
Precious metals	Ag ⁺ , Pd(II), Pt(II), Pt(IV), Ru(III), Rh(III), Ir(III), Ir(IV), Au(I) as Au(CN) ₂ ⁻ , Au(III) as AuCl ₄ ⁻
First transition series metals	Mn ²⁺ , Fe ²⁺ , Fe ³⁺ , Co ²⁺ , Co ³⁺ , Ni ²⁺ , Cu ²⁺ , Zn ²⁺ as a group; ions can also be analyzed individually except for Mn ²⁺ and Fe ²⁺
Heavy metals of environmental concern	Pb ²⁺ , Hg ²⁺ , Cd ²⁺ ; see Group 15 elements for As(V), Group 13 elements for Tl(I,III), and Group 6 elements for Cr(VI)
Actinides	Pu(IV), Th(IV), UO ₂ ²⁺
Inorganic oxo anions	Sulfate ion, sulfite ion, phosphate ion, selenate ion (only in the absence of sulfate ion), selenite ion