

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

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