

## 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  |