Group A

**A₃⁺, Hg²⁺, Pb²⁺**

- **Pb⁺²**
  - no ppt
  - PbCl₂ is much more soluble than AgCl or Hg₂Cl₂

- **Ag⁺, Hg²⁺**
  - KI
    - yellow ppt
    - Pb⁺²⁺
      - no ppt
      - no Pb⁺²
  - NH₃
    - ppt
    - Hg²⁺
      - no ppt
      - no Ag⁺
      - Ag⁺

Most cations are soluble in the presence of Cl⁻, except for A₃⁺, H₂⁺, Pb⁺²

Ag Cl(s) + 2NH₃ → [Ag(NH₃)₂]⁺ Cl⁻ cay
transitional metal complex

H₂WO₄⁻