Aldehydes

TEST: Heat with **Tollens' Reagent**

RESULT: Silver mirror will form

TEST: Heat with **Fehling's solution**

RESULT: Brick red precipitate will form

RHO +
$$2Ag(NH_3)_2^+(aq) + 3OH^-(aq) \xrightarrow{warm} 2Ag(s) + ROO^- + 4NH_3(aq) + 2H_2O(l)$$

silver (solid)

Aldehyde \longrightarrow Carboxylate Ion

RHO + 2Cu²⁺(aq) + 5OH⁻(aq)
$$\xrightarrow{\text{warm}}$$
 Cu₂O(s) + ROO⁻ + 3H₂O(l)

Copper (I) Oxide (solid)

Aldehyde → Carboxylate Ion

Carbonyls

TEST: Brady's Reagent (2,4-dinitrophenylhydrazine in dilute acid)

RESULT: Orange prepcipitate forms

Methyl Carbonyl

TEST: Warm solution of iodine and sodium hydroxide

RESULT: Yellow crystals form

