



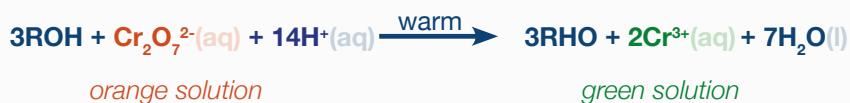
Organic Chemistry Revision Sheets

Functional Groups Tests

Alcohols

TEST: Warm with acidified potassium dichromate (VI), $\text{Cr}_2\text{O}_7^{2-} / \text{H}^+$

RESULT: Solution will change colour from **orange** to **green**



Alcohol \longrightarrow **Aldehyde or Ketone**

Aldehydes

TEST: Heat with **Tollens' Reagent**

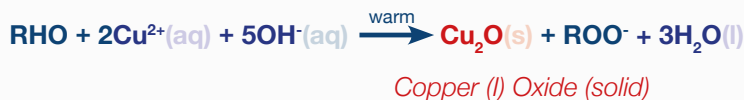
RESULT: **Silver mirror** will form



Aldehyde \longrightarrow **Carboxylate Ion**

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

RESULT: **Brick red** precipitate will form



Aldehyde \longrightarrow **Carboxylate Ion**

Alkenes

TEST: Addition of Bromine Water

RESULT: Solution will change colour from **orange-brown** to **colourless**



Alkene \longrightarrow **Dibromoalkane**

Carboxylic Acid

TEST: Addition of Sodium Carbonate

RESULT: Effervescence, gas produced turns lime-water from colourless to cloudy



Carboxylic Acid \longrightarrow **Carboxylate Ion**

Halogenoalkane (haloalkane)

TEST: Addition of hydroxide ions (in ethanol), followed by (dilute) nitric acid and silver nitrate (AgNO_3)

RESULT: Coloured precipitate forms



Halogenoalkane \longrightarrow **Alcohol**



$\text{AgCl}(\text{s}) = \text{white ppt}$, $\text{AgBr}(\text{s}) = \text{cream ppt}$ and $\text{AgI}(\text{s}) = \text{yellow ppt}$