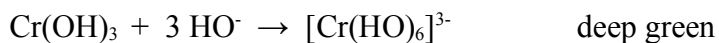


# Hydroxide Precipitates

$[\text{Cr}(\text{H}_2\text{O})_6]^{3+} + 3 \text{HO}^- \rightarrow \text{Cr}(\text{OH})_3 + 6 \text{H}_2\text{O}$	green *
$[\text{Mn}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Mn}(\text{OH})_2 + 6 \text{H}_2\text{O}$	white/beige
$[\text{Fe}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Fe}(\text{OH})_2 + 6 \text{H}_2\text{O}$	green
$[\text{Fe}(\text{H}_2\text{O})_6]^{3+} + 3 \text{HO}^- \rightarrow \text{Fe}(\text{OH})_3 + 6 \text{H}_2\text{O}$	brown
$[\text{Co}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Co}(\text{OH})_2 + 6 \text{H}_2\text{O}$	blue/pink (polymorphic) #
$[\text{Ni}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Ni}(\text{OH})_2 + 6 \text{H}_2\text{O}$	green #
$[\text{Cu}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Cu}(\text{OH})_2 + 6 \text{H}_2\text{O}$	blue #
$[\text{Zn}(\text{H}_2\text{O})_6]^{2+} + 2 \text{HO}^- \rightarrow \text{Zn}(\text{OH})_2 + 6 \text{H}_2\text{O}$	white

\* reacts with excess  $\text{HO}^-$



# reacts with excess of  $\text{NH}_3$

