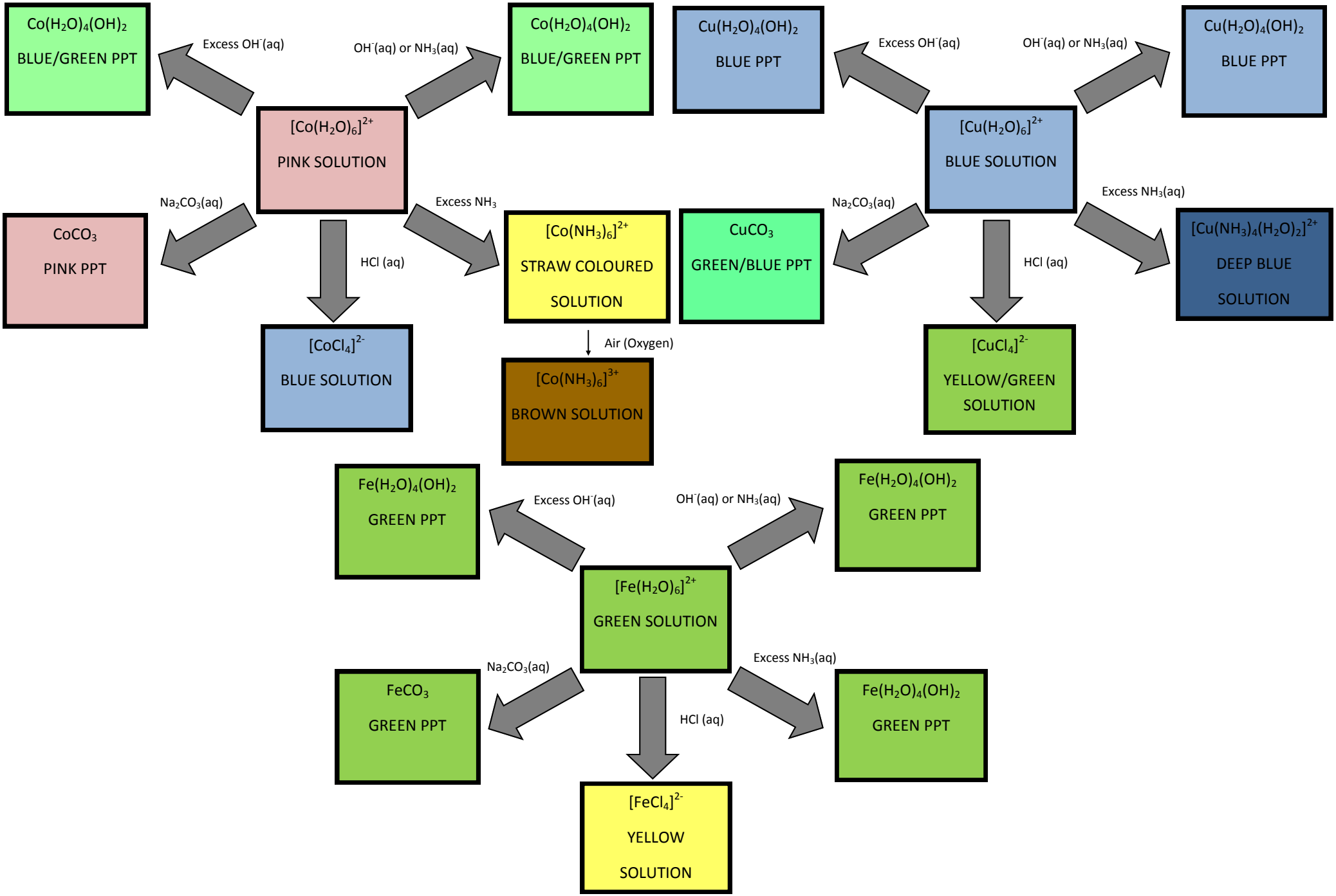
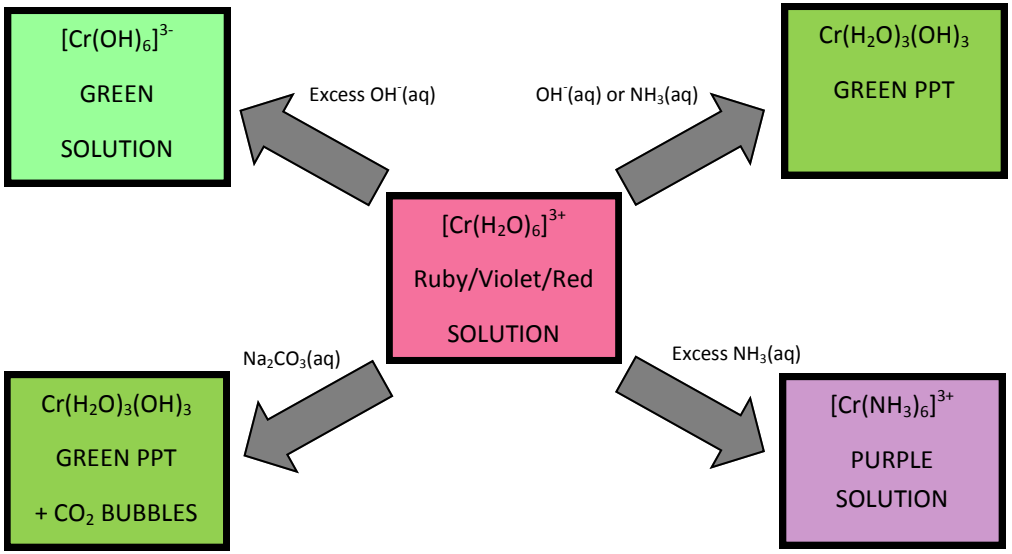
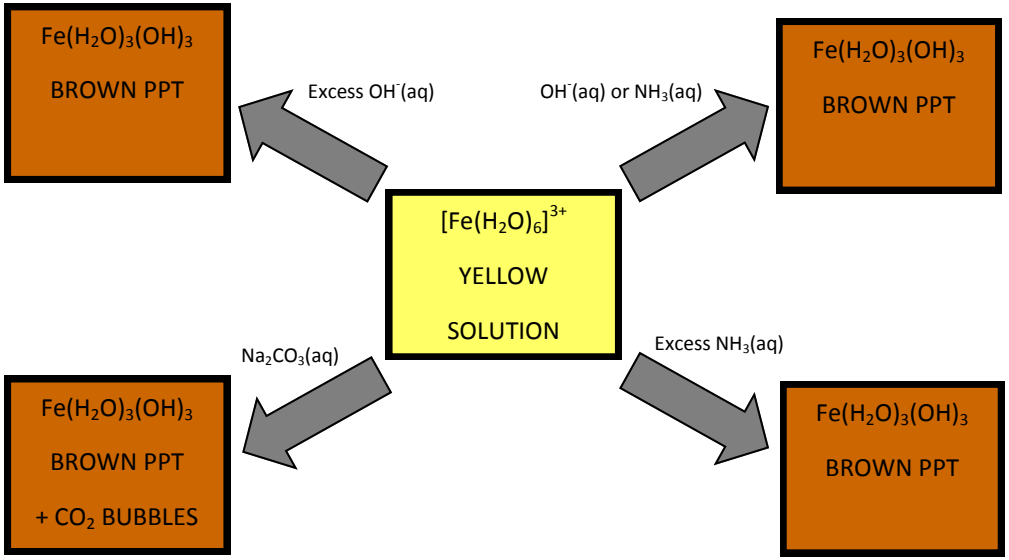
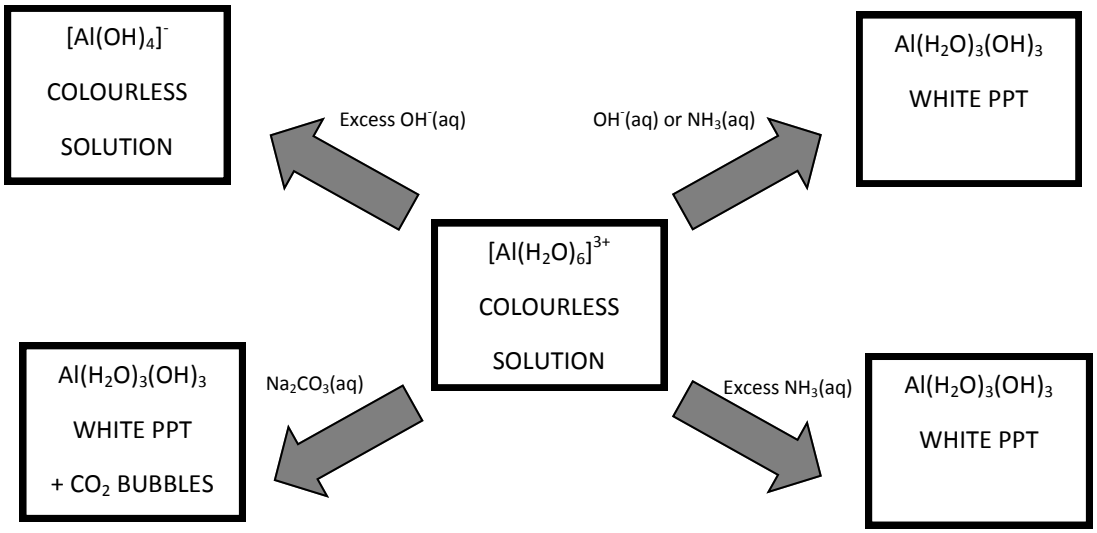

$Co(H_2O)_4(OH)_2$
BLUE/GREEN PPT
Excess OH^-(aq)
OH^-(aq) or NH_3(aq)
$Co(H_2O)_4(OH)_2$
BLUE/GREEN PPT
$[Co(H_2O)_6]^{2+}$
PINK SOLUTION
Na_2CO_3(aq)
$CoCO_3$
PINK PPT
HCl (aq)
$[CoCl_4]^{2-}$
BLUE SOLUTION
Excess NH_3
$[Co(NH_3)_6]^{2+}$
STRAW COLOURED
SOLUTION
Air (Oxygen)
$[Co(NH_3)_6]^{3+}$
BROWN SOLUTION
$Cu(H_2O)_4(OH)_2$
BLUE PPT
Excess OH^-(aq)
OH^-(aq) or NH_3(aq)
$Cu(H_2O)_4(OH)_2$
BLUE PPT
$[Cu(H_2O)_6]^{2+}$
BLUE SOLUTION
Na_2CO_3(aq)
$CuCO_3$
GREEN/BLUE PPT
Excess NH_3(aq)
$[Cu(NH_3)_4(H_2O)_2]^{2+}$
DEEP BLUE
SOLUTION
HCl (aq)
$[CuCl_4]^{2-}$
YELLOW/GREEN
SOLUTION
$Fe(H_2O)_4(OH)_2$
GREEN PPT
Excess OH^-(aq)
OH^-(aq) or NH_3(aq)
$Fe(H_2O)_4(OH)_2$
GREEN PPT
$[Fe(H_2O)_6]^{2+}$
GREEN SOLUTION
Na_2CO_3(aq)
$FeCO_3$
GREEN PPT
HCl (aq)
$[FeCl_4]^{2-}$
YELLOW
SOLUTION
Excess NH_3(aq)
$Fe(H_2O)_4(OH)_2$
GREEN PPT


$[Cr(OH)_6]^{3-}$
GREEN
SOLUTION
Excess $OH^-(aq)$
$OH^-(aq)$ or $NH_3(aq)$
$Cr(H_2O)_3(OH)_3$
GREEN PPT
$[Cr(H_2O)_6]^{3+}$
Ruby/Violet/Red
SOLUTION
$Na_2CO_3(aq)$
Excess $NH_3(aq)$
$Cr(H_2O)_3(OH)_3$
GREEN PPT
+ CO_2 BUBBLES
$[Cr(NH_3)_6]^{3+}$
PURPLE
SOLUTION


$Fe(H_2O)_3(OH)_3$
BROWN PPT
Excess $OH^-(aq)$
$OH^-(aq)$ or $NH_3(aq)$
$Fe(H_2O)_3(OH)_3$
BROWN PPT
$[Fe(H_2O)_6]^{3+}$
YELLOW
SOLUTION
$Na_2CO_3(aq)$
Excess $NH_3(aq)$
$Fe(H_2O)_3(OH)_3$
BROWN PPT
+ CO_2 BUBBLES
$Fe(H_2O)_3(OH)_3$
BROWN PPT


$[Al(OH)_4]^-$
COLOURLESS
SOLUTION
Excess $OH^-(aq)$
$OH^-(aq)$ or $NH_3(aq)$
$Al(H_2O)_3(OH)_3$
WHITE PPT
$[Al(H_2O)_6]^{3+}$
COLOURLESS
SOLUTION
$Al(H_2O)_3(OH)_3$
WHITE PPT
+ CO_2 BUBBLES
$Na_2CO_3(aq)$
Excess $NH_3(aq)$
$Al(H_2O)_3(OH)_3$
WHITE PPT