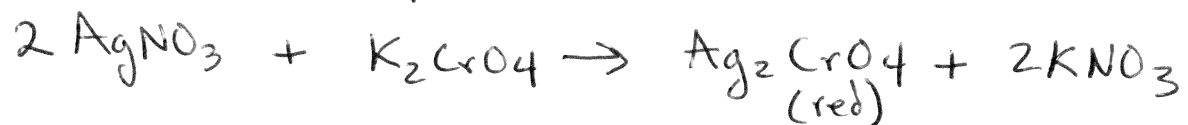


Separation of Fe^{+2} , Ag^+ , and Ba^{+2}
from a solution of all 3 cations

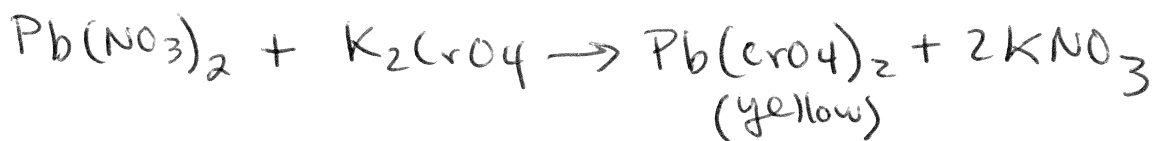
1. Place 3 drops of $\text{Fe}(\text{NO}_3)_3$, AgNO_3 , and $\text{Ba}(\text{NO}_3)_2$ in a clean tube. Mix.
2. Add 2 drops of 6M HCl. Mix.
3. Spin for \approx 30sec to 1min.
4. Remove the liquid to a new tube. Keep. Set the tubes with the pellets aside. Keep.
5. To the liquid from #4: Add NH_4OH solution until a rusty, brown ppt is fully formed.
6. Spin #5.
7. Remove liquid from #6 to new tube. Keep brown pellets (Positive for Fe^{+3}).
8. To the liquid from #7: Add 6M H_2SO_4 . A white ppt is positive for Ba^{+2} .
9. Confirmation of Ag^+ : Obtain the pellets from #4. Add 1mL NH_4OH . Mix. Pellets should dissolve. Add dropwise, 3M HNO_3 . A white ppt confirms Ag^+ .

Test Reactions of Ag^+ , Pb^{+2} and Ba^{+2} with K_2CrO_4

1. Place 2 drops AgNO_3 in tube. Add 2 drops K_2CrO_4 .
Should see red ppt.



2. Place 2 drops $\text{Pb}(\text{NO}_3)_2$ in a tube. Place 2 drops
 K_2CrO_4 . Should see yellow ppt.



3. Place 2 drops $\text{Ba}(\text{NO}_3)_2$ in tube. Place 2 drops
 K_2CrO_4 in tube. Should see pale yellow ppt.