

Step 1 is to prepare $\text{Fe}(\text{OH})_3$ (actually, hydrated Fe_2O_3). The easiest method, probably, is by acting with NaHCO_3 or NaOH on FeCl_3 solution. I, however, used a longer way:

- Precipitate FeCO_3 by reacting FeSO_4 with NaHCO_3 . It has dirty greenish color.
- Oxidize FeCO_3 to $\text{Fe}(\text{OH})_3$ by bleach: add bleach to the precipitate, heat to 60-70C stirring periodically, then decant solution and repeat if needed. Red-brown precipitate of hydrated Fe_2O_3 is produced.

Step 2: prepare individual K and Na trioxalatoferates (my procedure is lengthy, K trioxalatoferate has relatively low solubility and there are easier preparations)

- Dissolve $\text{Fe}(\text{OH})_3$ in oxalic acid, taking 3 mols of acid per 1 mol of $\text{Fe}(\text{OH})_3$. Dark brown solution is obtained.
- Carefully add NaHCO_3 or K_2CO_3 to the solution, again 3 mols of K or Na per 1 mol of Fe. Solution gradually lightens and turns green. Excess would make solution reddish, it can be fixed by additional oxalic acid.
- Evaporate the solution partially, and then cool it down and harvest green crystals of K or Na trioxalatoferates.

Step 3: mix K and Na salts in 2:1 ... 3:1 molar ratio, prepare saturated solution and grow crystals in any convenient way (K:Na ratio in the salt is 5:1, but pure K salt crystallizes from 5:1 solution, excess of Na is required).