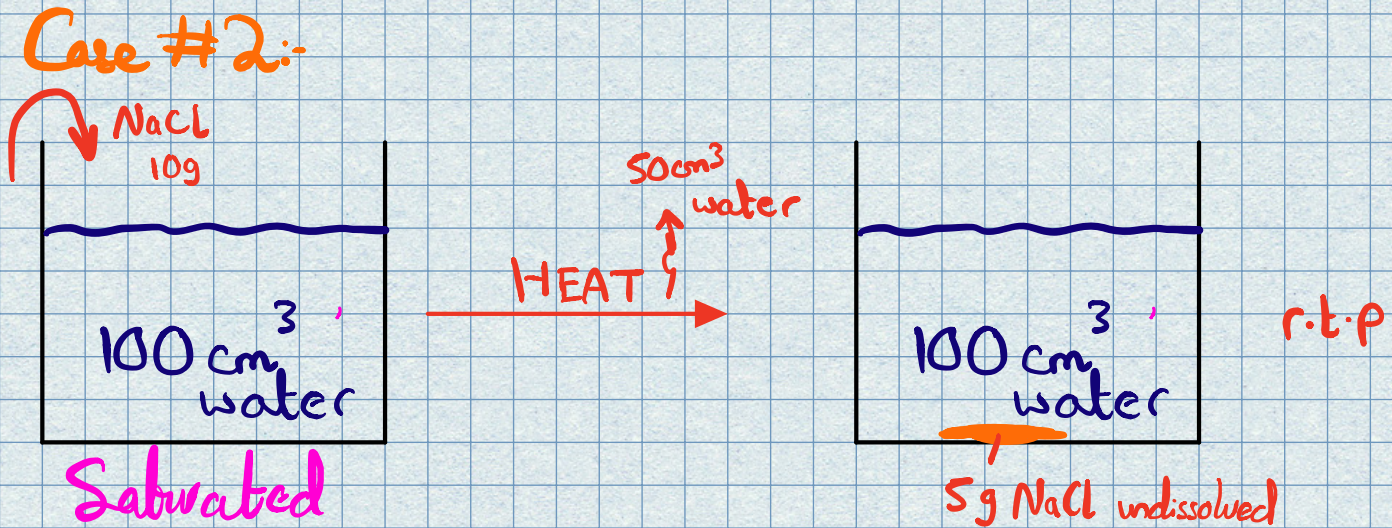
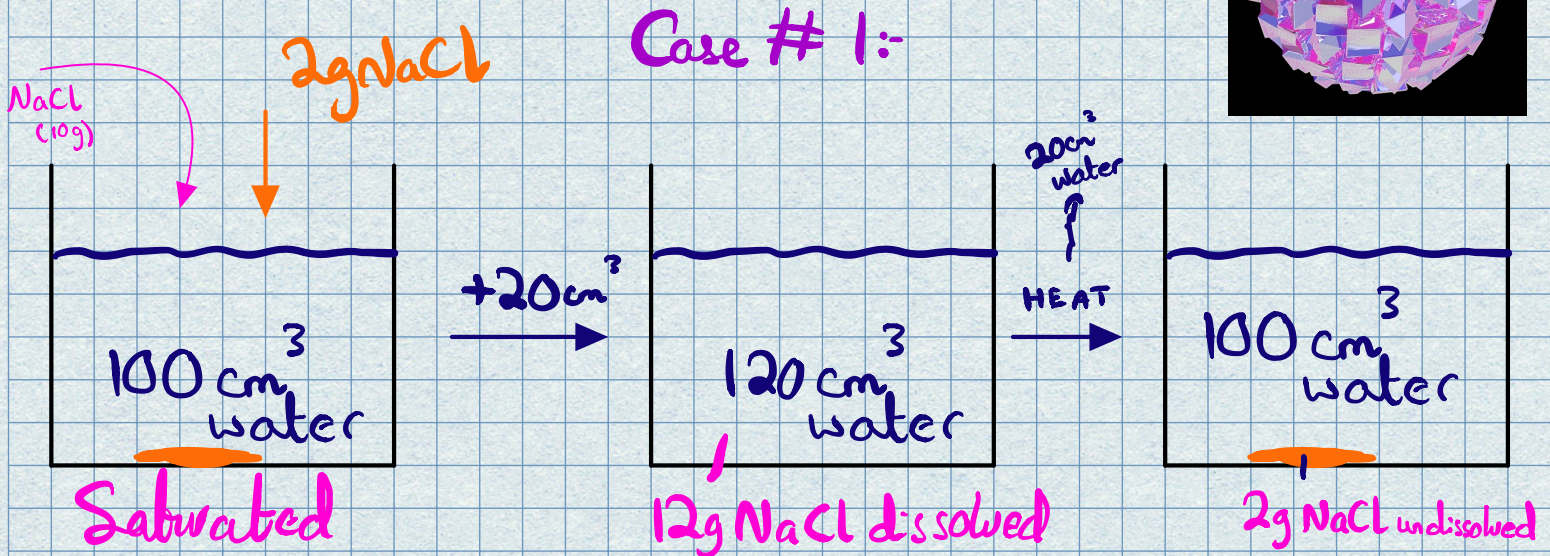


Crystallization

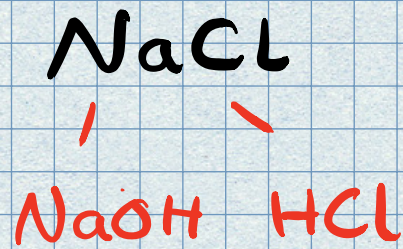
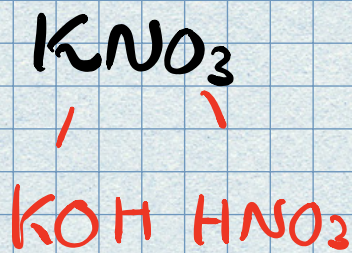
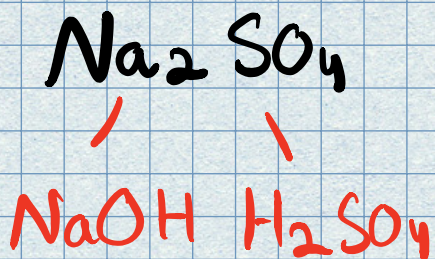


★ The amount of solvent used to dissolved the solute, The same amount of solute will be undissolved if Same amount of solvent is removed from solution

★ Solubility of solids can be increased by increasing solvent or Increase in Temperature!

★ When a saturated solution is heated, half its volume, then cooled at R.t.p, The crystal of solute reappear in solution!

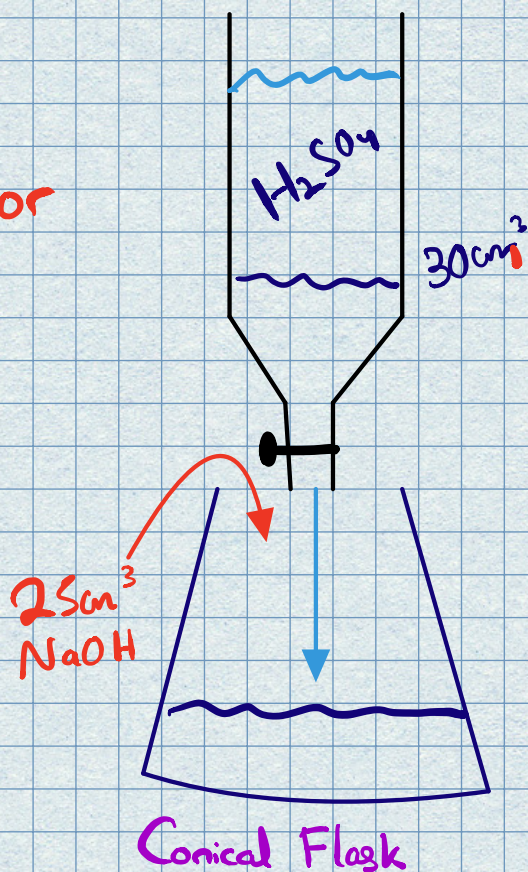
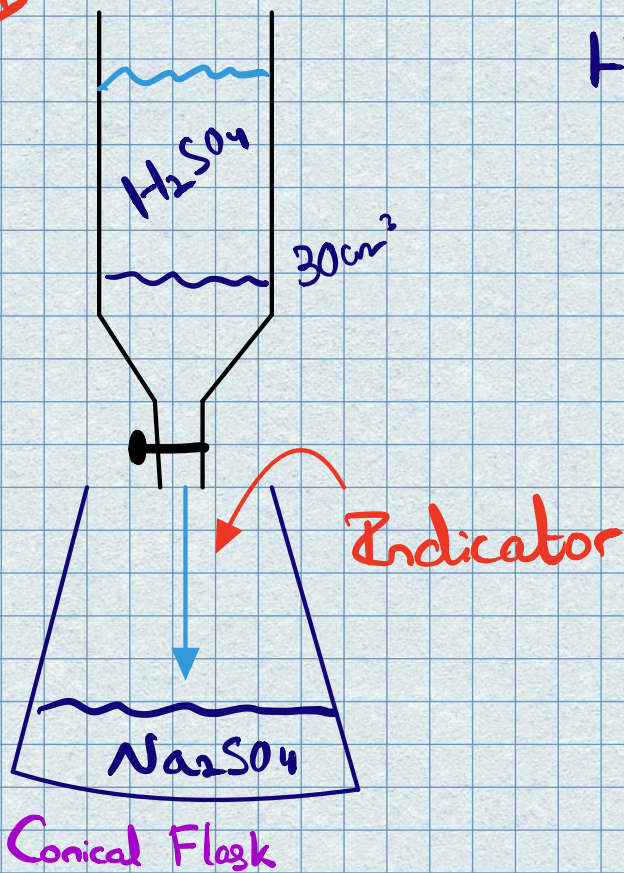
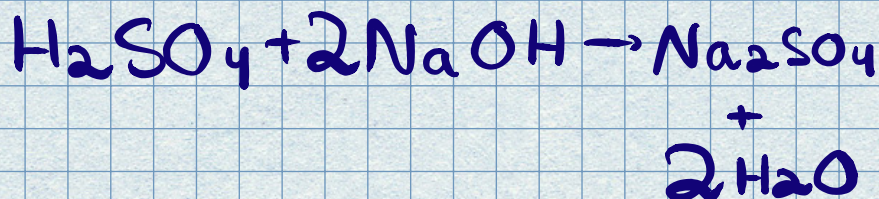
Preparation of Soluble Salt

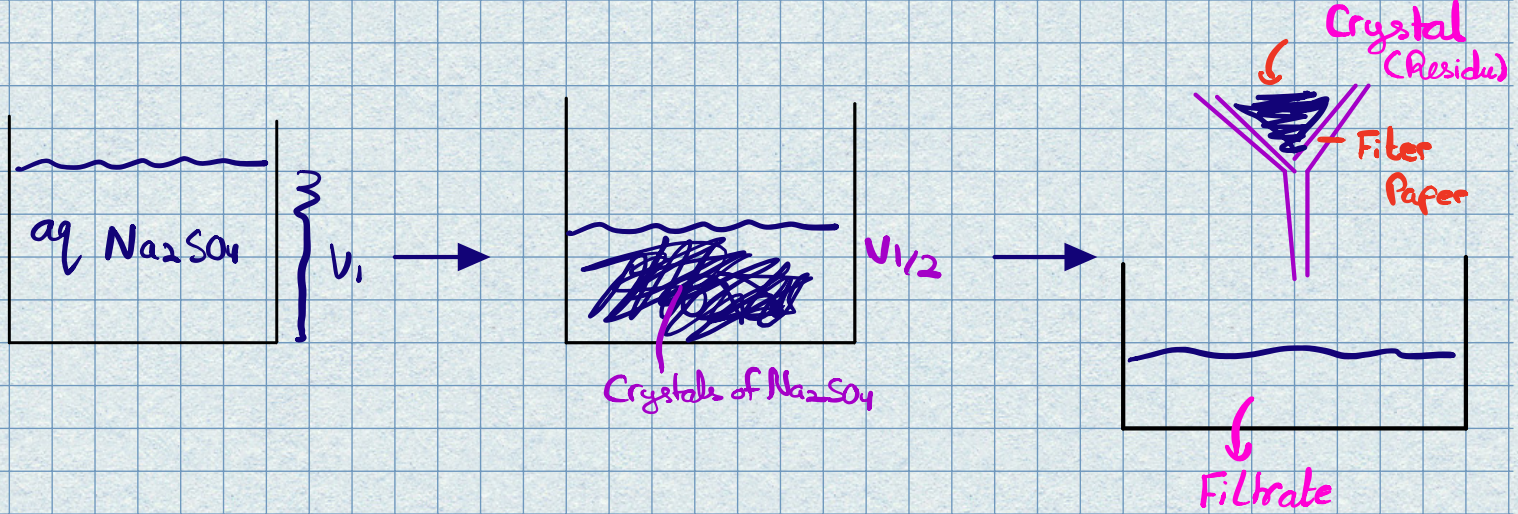


Na_2SO_4 :- The Chosen one ♡

TITRATION

I





*1) Put the standard solution of H_2SO_4 in burette

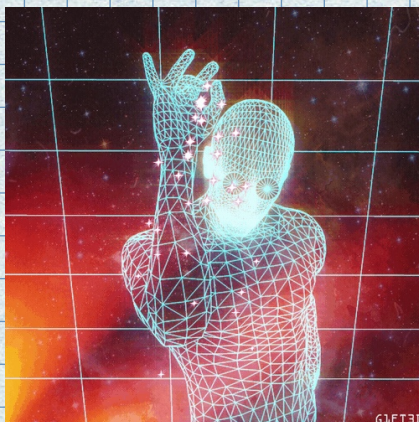
o) Pipette out standard solution NaOH into the flask then add few drops of Indicator

*1) **Start Titration**, by adding solution from burette into the flask until Indicator shows the color change

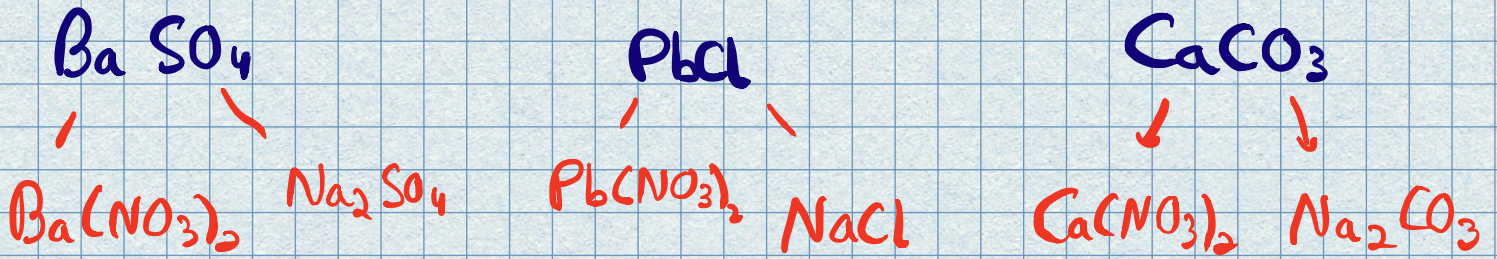
o) Repeat the Titration without indicator by addition of known volume of solution from Burette into the flask

*1) Now, heat the salt solution half its volume, then cool it down at R.T.P

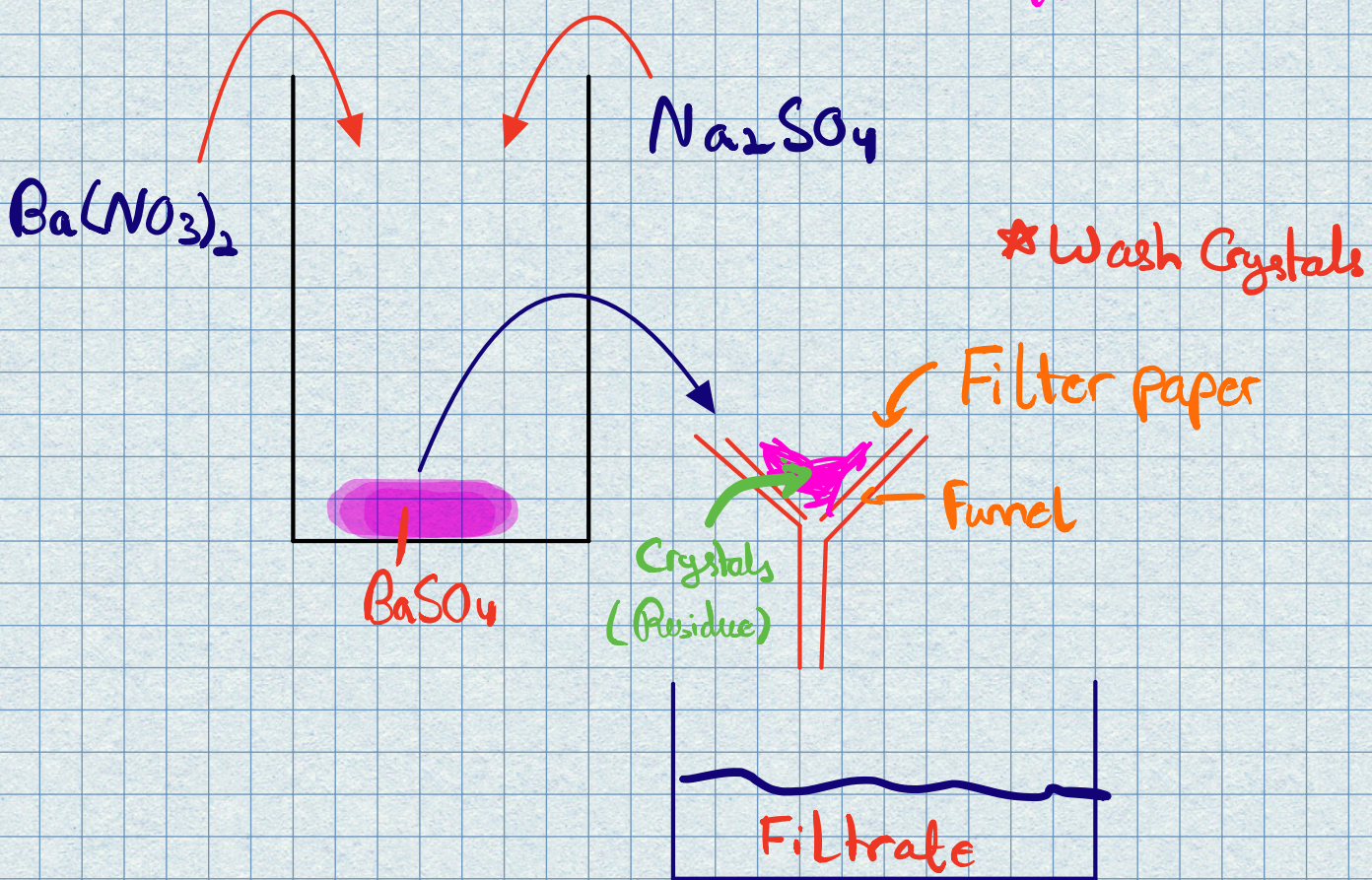
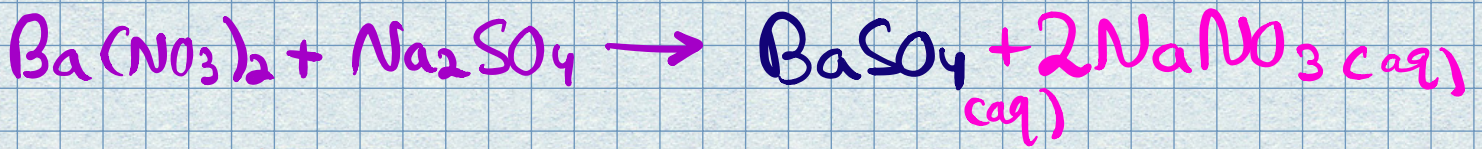
o) Filter out the crystals and dry them in Sunlight/Oven!



Preparation of Insoluble Salt (Precipitation)



$BaSO_4$ (The Chosen one) ♥

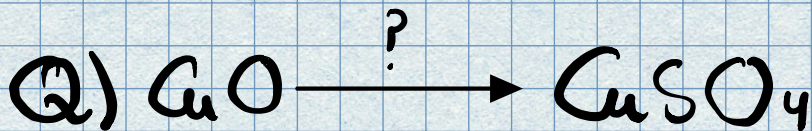
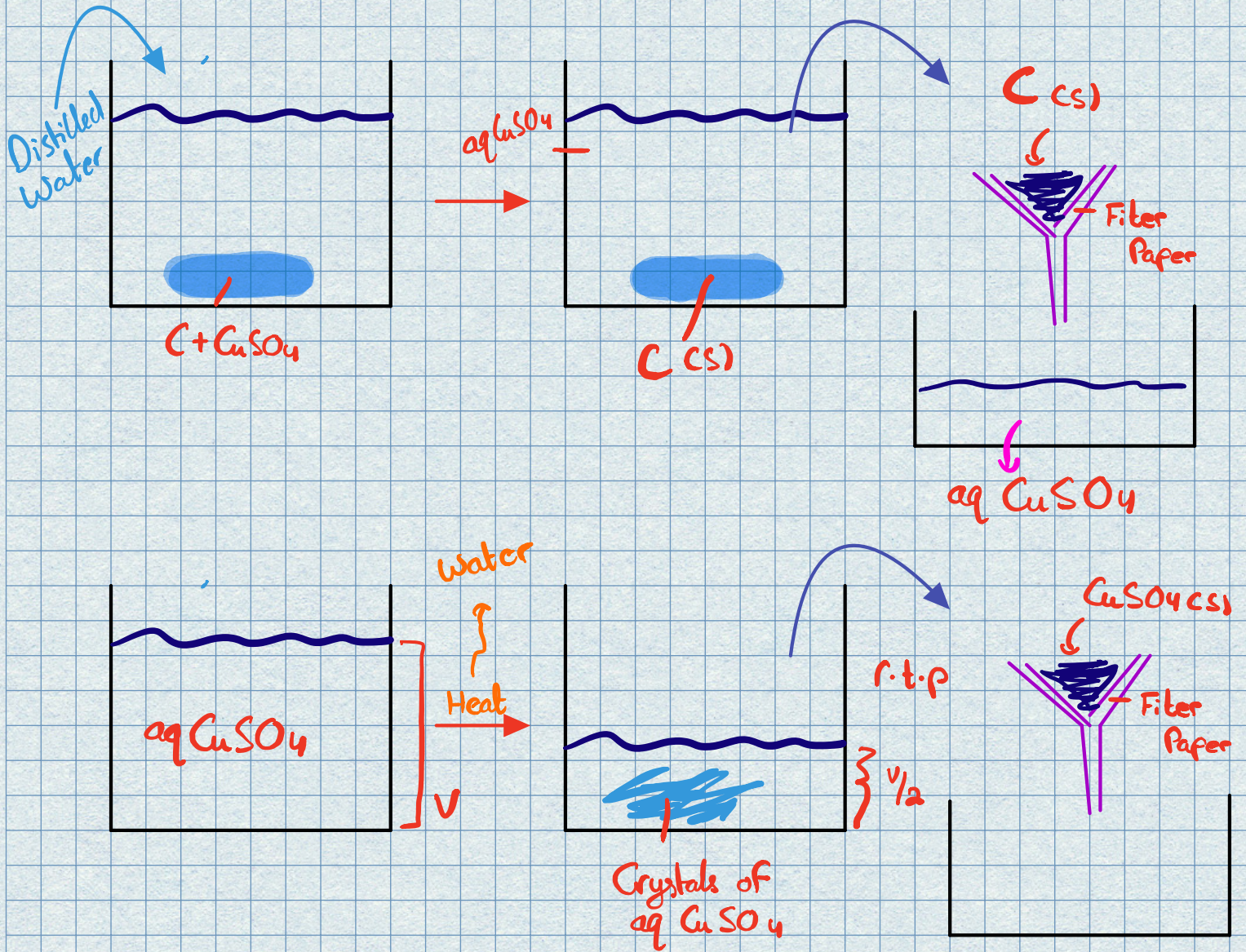


- 1) Mix both Aq Solution of $Ba(NO_3)_2$ and Na_2SO_4
- 2) Filter of the precipitate of $BaSO_4$ and then wash with distilled water
- 3) Dry them with help of oven / sunlight

Preparations of Soluble salt from a mixture containing Soluble & Insoluble substance!

Q) A mixture contains **carbon powder** & **CuSO₄ powder**!

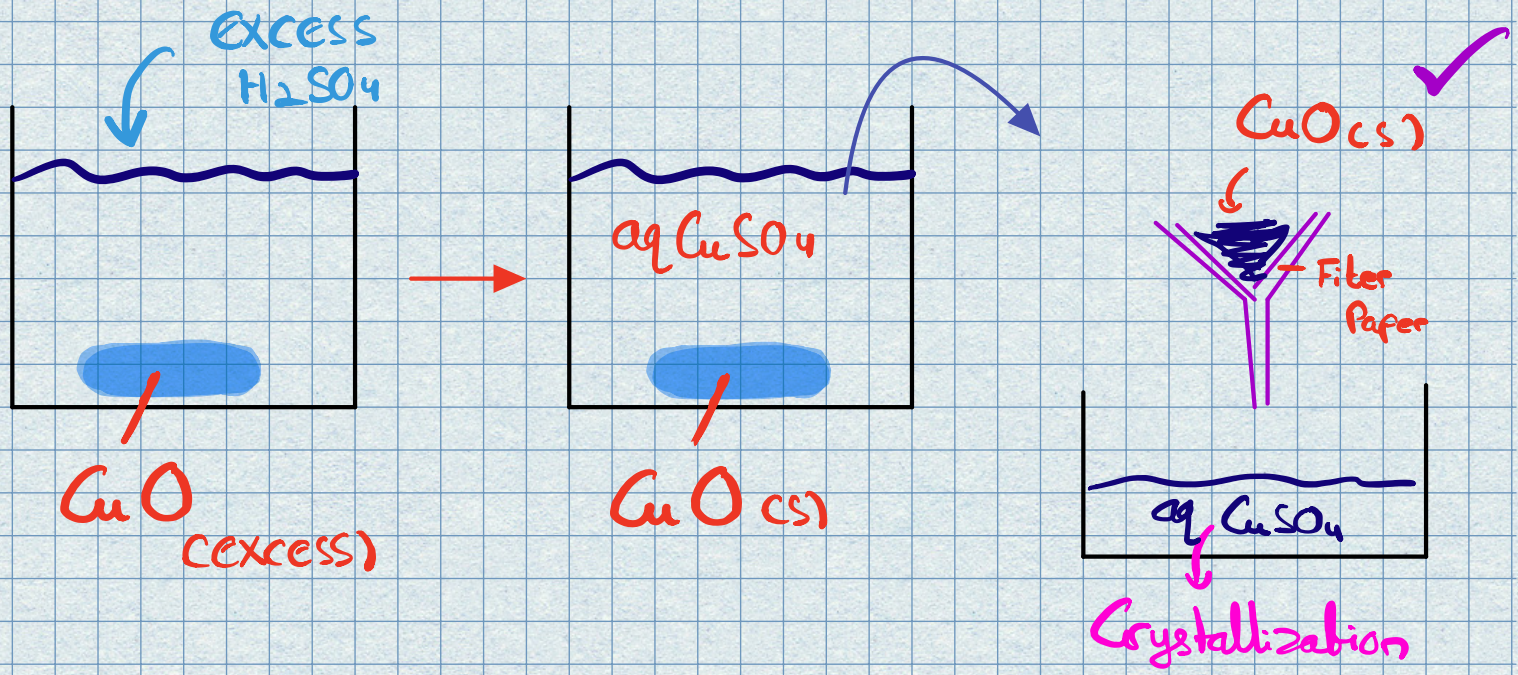
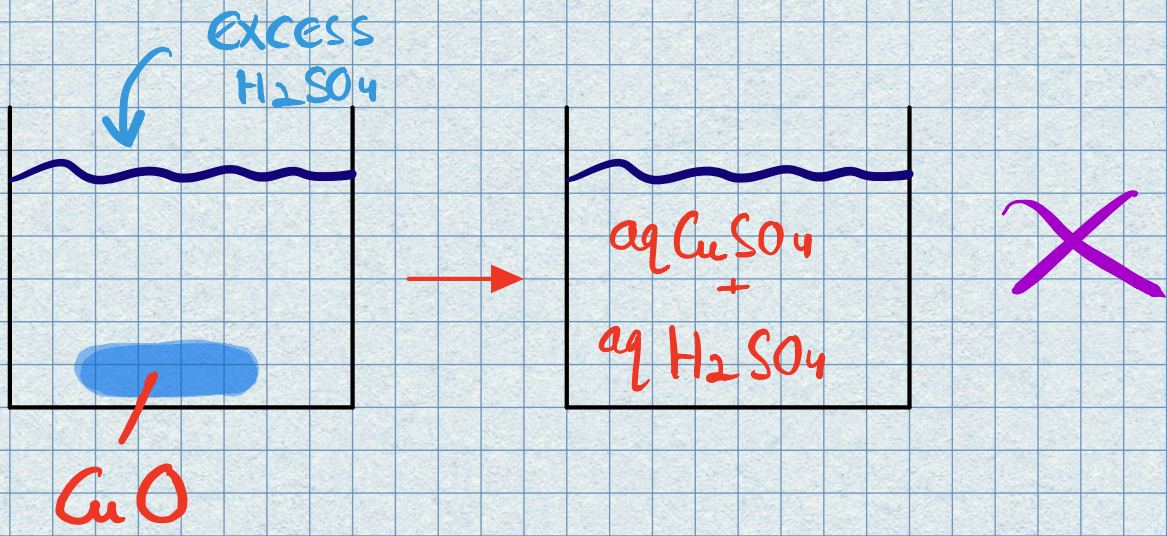
↑ Insoluble ↑ Soluble



✓ excess

✗ excess

✓ limiting ✓



LOVE
YOURSELF

承



Soluble and insoluble mix Salt:-

* add distilled water to the mixture containing "C" and "CuO"

o) Stir the mixture well with the help of Glass rod!

* Filter the solution by using a funnel and filter paper

o) Crystallize out the Filtrate

(Heat half its volume then cool it down at r.t.p)

→ Dry the crystals!

Insoluble base and Acid:-

* Add excess CuO to aq H_2SO_4

* Stir well with the help of Glass rod!

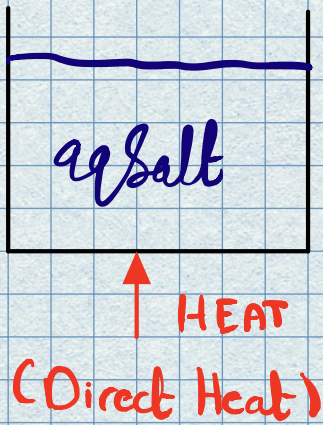
* Filter out excess CuO with the help of Funnel & Filter Paper

* o) Crystallize out the $CuSO_4$ crystals

(Filter them)

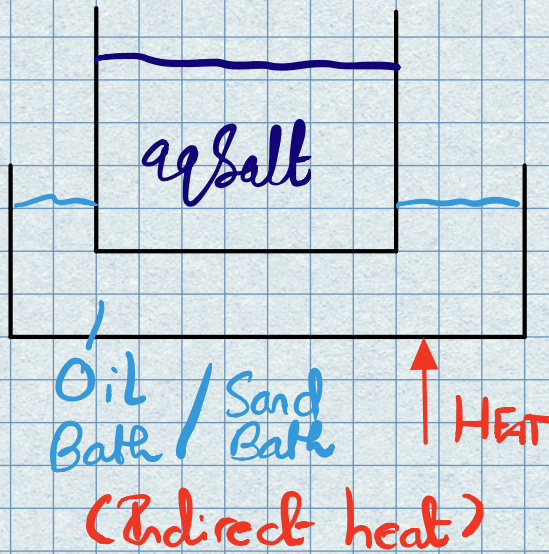
→ Dry the crystals!

Types of Crystals:-



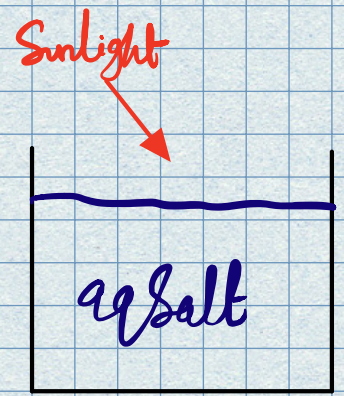
Powdered Crystals

No water of Crystallization



Small Crystals

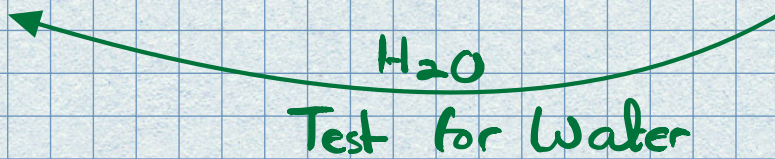
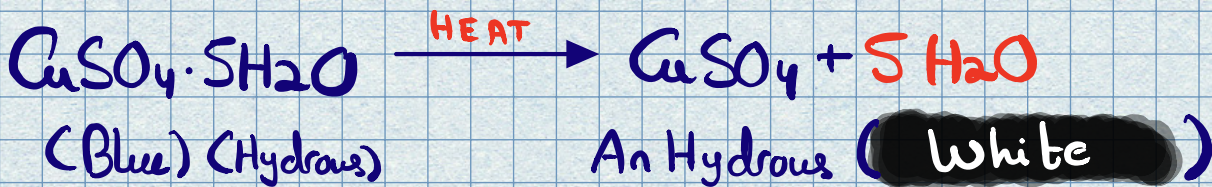
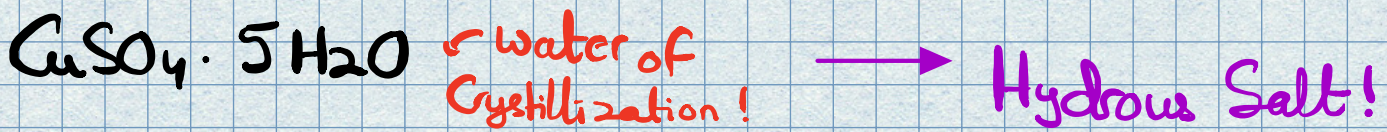
Still contain water of Crystallization



Slow Heating
large Crystals

Still contain water of Crystallization

*1) Hydrone and An Hydrone Salt



Water:- It turns anhydrous CuSO_4 from **White** to Blue!