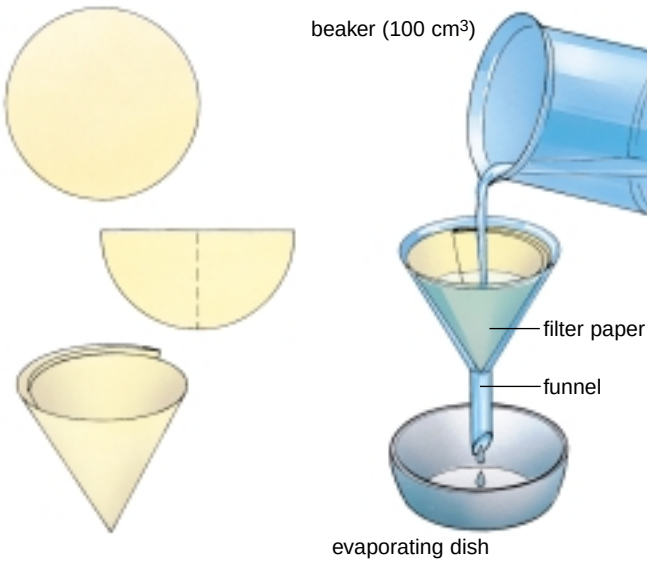
Finding out: Purification of rock salt

Rock salt is sodium chloride mixed with insoluble impurities. In this experiment you will remove these impurities to produce pure sodium chloride.

Instructions

1 Put about 40 cm^3 of distilled water into the small beaker. Add 3 spatula measures of crushed rock salt to this. Stir with the glass rod until the salt has dissolved. The impurities will remain undissolved.

2 Take a piece of filter paper and fold it in half and in half again as shown in the diagram below. Open it out to produce a paper cone with three thicknesses of paper on one side and one on the other. Put this cone into the filter funnel and moisten the paper cone with a few drops of water to fix the cone inside the funnel.

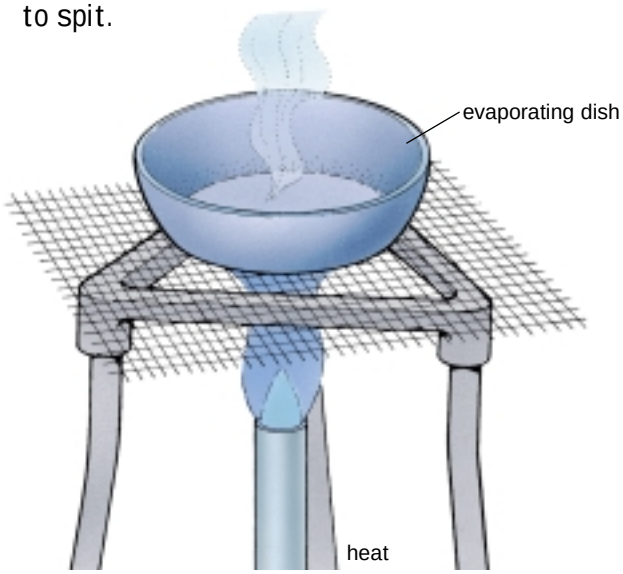


3 Pour the solution from the beaker into the funnel and collect the solution which passes through the filter paper in the evaporating basin.

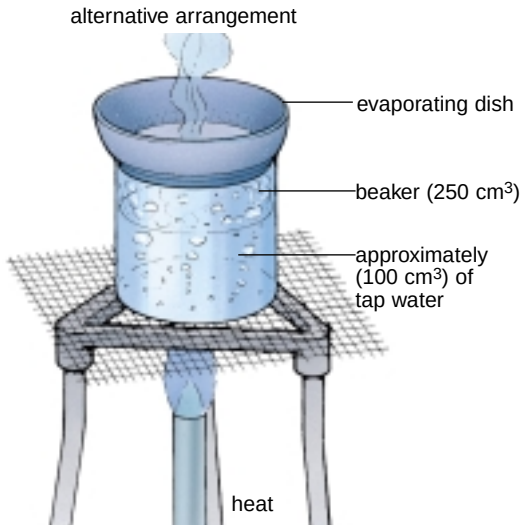
WARNING

You must wear goggles when evaporating this solution. The solution can spit. If spitting occurs, turn down the gas to make the flame smaller.

4 Place the evaporating basin on the tripod and gauze and heat steadily until the solution starts to spit.



5 Then, evaporate the solution more slowly using the apparatus shown below.



6 When the salt appears dry, leave the evaporating basin to cool. You will have produced some white crystals of salt.