GCSE-2-1 Separating sand and salt

Apparatus (per group)

- Heatproof mat and Bunsen burner
- Tripod and gauze
- 50ml measuring cylinder
- 250ml beaker
- Stirring rod
- Filter funnel and paper
- 250ml conical flask
- Evaporating basin
- Balances

Chemicals

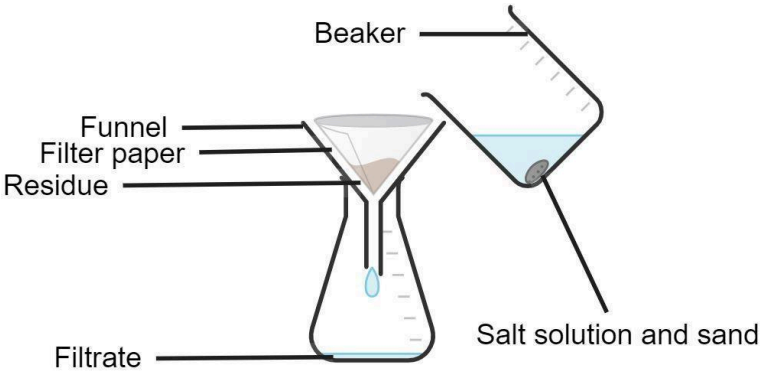
- Mixture of sodium chloride and sand, ~ 20% salt by mass
- Tap water

Waste disposal

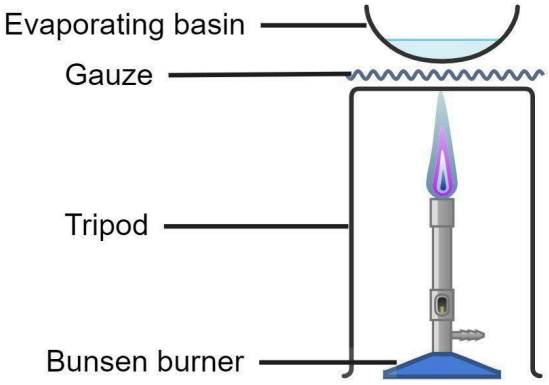
- Filter paper and sand: solid waste
- Do not allow sand to be poured down the sink - leave the residues in beakers for collection

Separating salt and sand

1. Weigh 5g of the sand and salt mixture into a beaker.
2. Add 50cm^3 of tap water to the beaker. Stir with the glass rod
3. Filter the mixture into a conical flask.



4. Once filtration is complete, pour the contents of the conical flask into an evaporating basin.
5. Heat the evaporating basin (see diagram). Do not allow it to boil completely dry - if the mixture starts to spit turn off the heat immediately.



6. Turn off the heat and allow the apparatus to cool. The remaining water will evaporate, but more slowly and safely.
7. Place your evaporating basin in a safe place - follow your teacher's instructions.
8. Clean up: wait for the hot apparatus to cool before dismantling. Place used filter paper in the bin. Place used glassware in the red bin (DO NOT rinse sand down the sink).

Experiment Hazard Assessment

Experiment: Separating salt and sand
Reference: GCSE-2-1

Chemical hazards

Sodium chloride and sand mixture	Currently not classified as hazardous	CLEAPSS Hazcards 47B and 86A

Other hazards / precautions for teachers and technicians

Hot apparatus – make sure that the apparatus has cooled before dismantling.