

Practice - Separation of Mixtures

Taking advantage of the various physical properties, how would you separate the following mixtures into their components?

1. Sand and water
Sand: solid, insoluble, large particle, dense
Water: fluid, small particle

Filter

2. Sugar and water
Sugar: soluble, solid
Water: Low Boiling Point

Evaporate

3. Oil and water
Oil: low density, fluid
Water: Higher density, fluid

Decant

4. Sand and gravel
Sand: small solid
Gravel: Large solid

Filter

5. A mixture of heptane (boiling point 98°C) and heptanol (boiling point 176°C)

Heptane: fluid, low boiling point
Heptanol: fluid, high boiling point

Distillation

6. A mixture of iodine solid and sodium chloride (Hint: iodine is not soluble in water)

sodium chloride: soluble
iodine: insoluble

Filter

Evaporate

7. A mixture of lead and aluminum pellets of the same size. (Hint: ^{sol.}chlor)
Neither is magnetic) lead: dense
aluminum: less dense than H_2O

(pour in H_2O , Al floats to top)

8. A mixture of salt and iron filings of the same size.

salt: not magnetic
iron: magnetic

Magnetic Attraction