

Starter activity – Identify the relevant separation technique Paper 3

Q# 3/ iGCSE Chemistry/2011/s/Paper 31/

1 The following techniques are used to separate mixtures.

A simple distillation

B fractional distillation

C evaporation

D chromatography

E filtration

F diffusion

From this list, choose the most suitable technique to separate the following.

- (a) methane from a mixture of the gases, methane and ethane [1]
- (b) water from aqueous magnesium sulfate [1]
- (c) glycine from a mixture of the amino acids, glycine and lysine [1]
- (d) iron filings from a mixture of iron filings and water [1]
- (e) zinc sulfate crystals from aqueous zinc sulfate [1]
- (f) hexane from a mixture of the liquids, hexane and octane [1]

[Total: 6]



Extension activity

Q# 2/ iGCSE Chemistry/2012/w/Paper 31/

Butane and propane are both gases, silver chloride is a salt that is insoluble in water, glucose and maltose are both sugars.

1 A list of techniques used to separate mixtures is given below.

filtration
diffusion
fractional distillation
simple distillation
crystallisation
chromatography

From this list, choose the most suitable technique to separate the following mixtures.
A technique may be used once, more than once or not at all.

- (a) butane from a mixture of propane and butane [1]
 (b) oxygen from liquid air [1]
 (c) water from aqueous magnesium sulfate [1]
 (d) potassium chloride from aqueous potassium chloride [1]
 (e) silver chloride from a mixture of silver chloride and water [1]
 (f) glucose from a mixture of glucose and maltose [1]

[Total: 6]

Q# 8/ iGCSE Chemistry/2007/w/Paper 3/

Helium and argon are gases at room temperature.

Barium sulphate does not dissolve in water.

1 A list of techniques used to separate mixtures is given below.

fractional **simple** **crystallization** **filtration** **diffusion**
distillation **distillation**

From the list choose the most suitable technique to separate the following.

- water from aqueous copper(II) sulphate
 helium from a mixture of helium and argon
 copper(II) sulphate from aqueous copper(II) sulphate
 ethanol from aqueous ethanol
 barium sulphate from a mixture of water and barium sulphate [5]

