Name: Class:

5 Minutes Starter Activity –Which separation technique?

Q#1/ 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]

Name: Class:

Extension activity – How fast can you finish?

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# 3/ 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 distillation **simple distillation** **crystallization** **filtration** **diffusion**

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]

Name: Class:

Mark Scheme & Review of today's class

Q# 1/ iGCSE Chemistry/2011/s/Paper 31/

1 (a) F or B diffusion / fractional distillation

(b) A simple distillation

(c) D chromatography

(d) E filtration

(e) C evaporation

(f) B fractional distillation

Q#2

1 (a) diffusion or fractional distillation;

(b) fractional distillation;

(c) simple distillation;

(d) crystallisation;

(e) filtration;

(f) chromatography;

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

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

1 simple distillation [1]
diffusion **or** fractional distillation [1]
crystallisation [1]
fractional distillation [1]
filtration [1]
NOTE As the candidate are selecting from a list, the above are the only acceptable responses. **[Total: 5]**

Exit ticket for iGCSE Chemistry

Name:

Thinking back to how today's lesson went try your best to answer these questions as fully as possible.

What kinds of habits did you notice about yourself that you thought helped you most in this lesson?

Thinking about the Starter task about seperation techniques, what were the kinds of things that allowed the most successful students to do so well?

Which ideas did you find hardest? Can you think of an explanation why one solvent is better at seperating the mixture in the plant sample than another?

Circle below how well you feel you understood today's lesson, with 1 being you understoood everyinng and 5 being you struggled throughout.

1 2 3 4 5

What could be done to make this topic easier to understand?

Do you have any questions about today's topic or this lesson in particular?