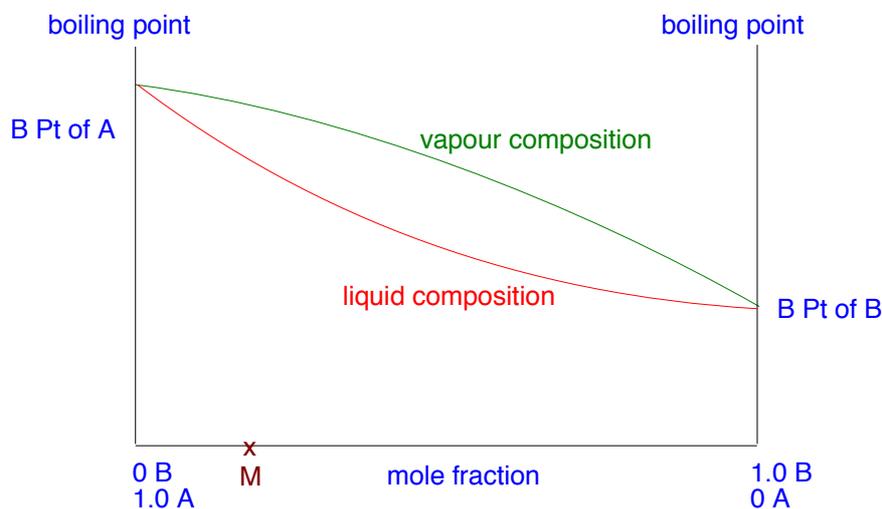


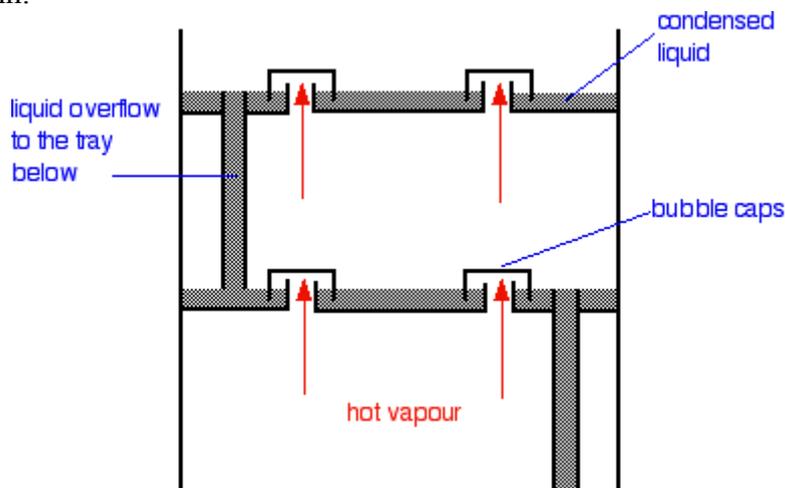
## Chemguide – questions

### FRACTIONAL DISTILLATION OF IDEAL MIXTURES OF LIQUIDS

1. Use the phase diagram below to explain how you can obtain a pure sample of B from a mixture M by successively boiling and condensing the liquid mixture.



2. a) Draw a piece of apparatus that you could use to separate a mixture of two liquids in the lab.
- b) Why is it important to carefully control how strongly the original mixture is heated during the separation?
- c) Explain briefly how the separation occurs, making use of the phase diagram above if you think it helps.
3. The diagram (from the Chemguide page) shows a cross-section through a small bit of an industrial fractionating column.



Explain what is happening in this diagram, and how it helps to separate the liquid mixture.