8.7. Thin layer chromatography
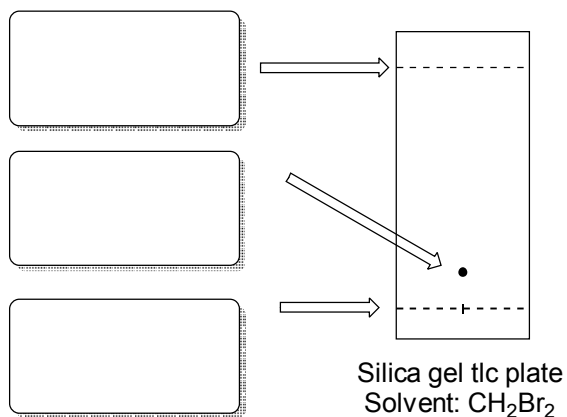
Thin layer chromatography can be used to separate mixtures. Look at the chromatogram shown below.

Silica gel tlc plate
Solvent: CH_2Br_2

1. Fill in the features indicated by arrows on the chromatogram.   (3 marks)
2. Label the stationary phase and mobile phase on the diagram.   (2 marks)
3. Calculate Rf for the sample shown, show your working.   (3 marks)
4. Not all samples are visible after a chromatogram has been run. Give 2 ways in which the sample can be visualised on the silica gel plate.   (2 marks)
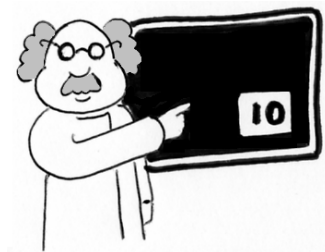
8. Answers

8.5 13C NMR spectroscopy

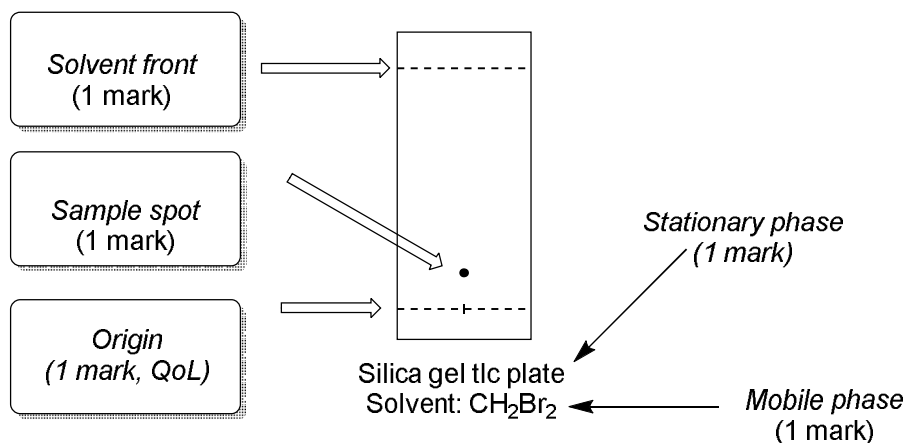|		
1 B C	**2** A H	**3** D J
4 F I	**5** E	**6** G
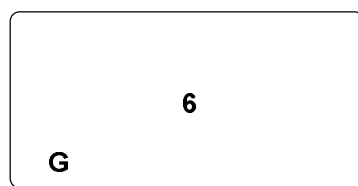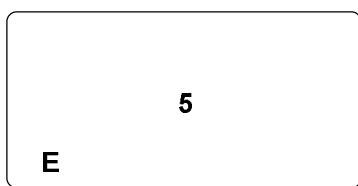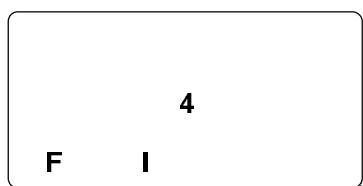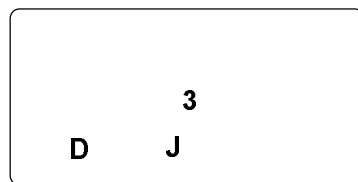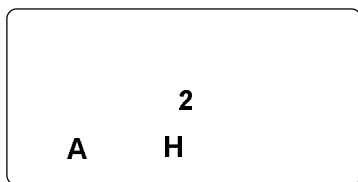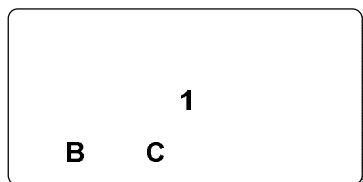
8.6 Molecular true or false

1. T 2. F 3. F 4. T 5. T 6. F 7. F 8. T 9. T 10. F

8.7 Thin layer chromatography

Solvent front (1 mark) →

Sample spot (1 mark) →

Origin (1 mark, QoL) →

Stationary phase (1 mark)

Silica gel tlc plate
Solvent: CH_2Br_2 ←

Mobile phase (1 mark)

1 and **2** as above total = 5 marks

3. Measurement from origin to centre of spot (1 mark), measurement of origin to solvent front (1 mark) division of measurement 1 by measurement 2 (1 mark)

4. UV light (1 mark) and staining/names stain such as DNP/DCPIP (1 mark)

8.8. Gas Chromatography – Mass Spectrometry

1. (relative) solubility (1 mark)

2. The gas stream (1 mark)