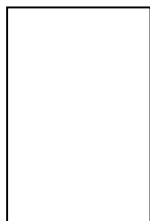
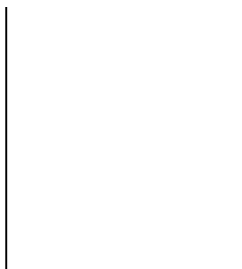


- 1 Paper chromatography is a method for analyzing food dyes. Food dyes often contain a mixture of colours.

Some of the equipment needed is shown below.



Filter paper



Beaker



Food dye samples

- 1 (a) (i) Describe how paper chromatography can be carried out to determine the number of different colours that are present in food dye. Name any other equipment or substances you might need.

Draw pencil line on filter paper/chromatography paper [1 mark]

Put small spot of a dye/each dye on the pencil line using pipette/dropper [1 mark]

Put water/solvent into the beaker [1 mark]

Place bottom of filter paper in the water/solvent taking care that dye doesn't contact water. [1 mark]

Place lid on beaker [1 mark]

Remove after a certain amount of time or named time interval. [1 mark]

Number of colours/spots can be counted for each dye [1 mark]

(4 marks)

- 2 (a) (i) Suggest one advantage of using paper chromatography over gas chromatography for analyzing food dyes.

Easier/cheaper [1 mark]

(1 mark)

The first question is a describe question so no real need to explain why the colours separate, or why the line has to be in pencil (the reason is so that it doesn't dissolve in the solvent).

(Total 5 marks)