GCSE Chemistry B (Twenty First Century Science)

J258/02 Depth in chemistry (Foundation Tier)

Question Set 8

1 Salt that is used for food contains compounds of Group 1 elements.
One type of food salt is called 'Healthy salt'.

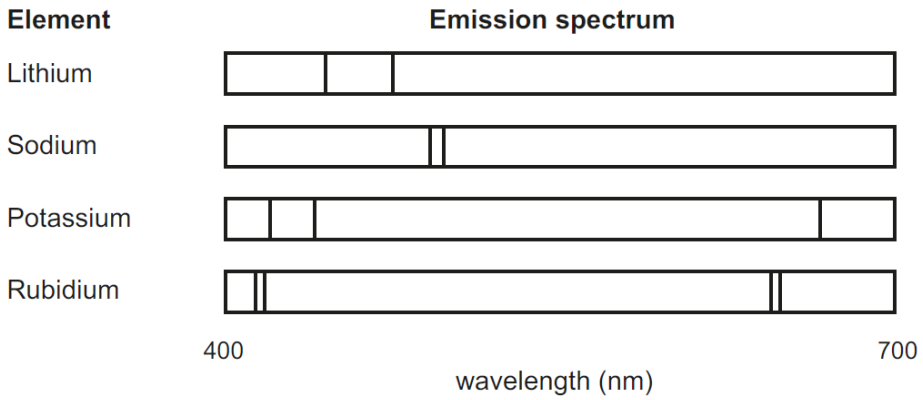
Ben wants to find out what the difference is between table salt and 'Healthy salt'.

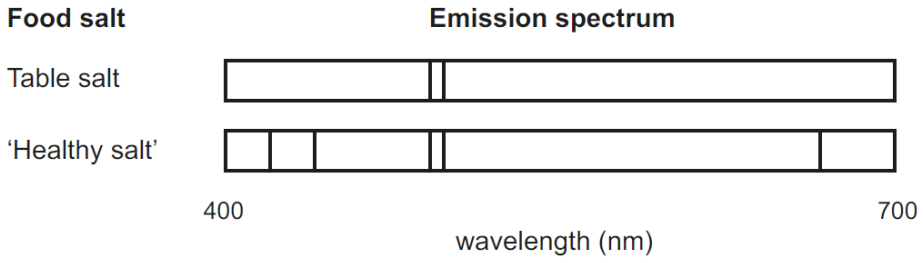
He does some experiments to find the emission spectra of some Group 1 elements.

He also does experiments to find the emission spectra of table salt and 'Healthy salt'.

He puts small samples of each element and salt in a spectroscopy machine and looks at the printout of results.

Here are Ben's results.





(a)* What conclusions can you make about the elements that table salt and 'Healthy salt' do and do not contain?

Explain how the lines in both emission spectra support your conclusions.

[6]

(b) Elements in salts can also be identified using chemical tests.

Each test involves adding chemicals to the salts and looking for colour changes or reactions.

Ben thinks that spectroscopy is a better method to use to identify the elements.

What are the **advantages** and **disadvantages** of using spectroscopy rather than chemical tests to identify elements? **[3]**

(c) Ben says that spectroscopy is a qualitative technique.

He says that he wants to try a quantitative technique to find out more about the salts.

Draw lines to connect each **technique** with its **use**.

Technique	Use
	Used to make samples of chemicals.
	Used to measure the amount of chemical in a sample.
Qualitative technique	
	Used to investigate the reactivity of a sample.
Quantitative technique	
	Used for separation of chemicals.
	Used to find out what chemicals are in a sample.

[2]

Total Marks for Question Set 8: 11