

- 1 Clean drinking water is important for health. In the UK water from reservoirs goes through a series of steps before it is safe to drink. Two of the steps involve filtering and adding chlorine.

What is the purpose of filtering and adding chlorine?

[2 marks]

Filtering

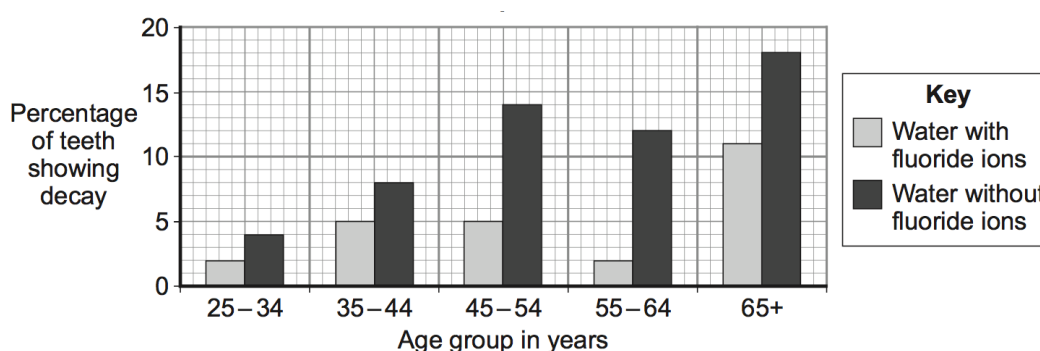
Remove solids or insoluble material [1 mark]

Adding chlorine

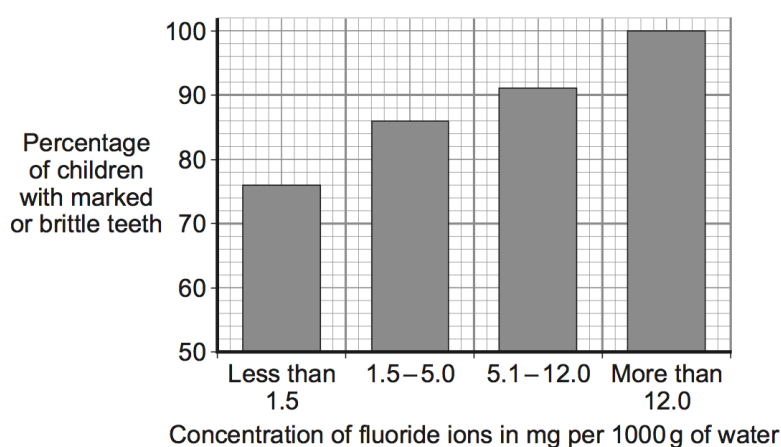
Killing microbes or bacteria or sterilising [1 mark]

- 1 (a) Another step in the producing drinking water is the addition of fluoride ions. The two graphs below show information about the effect of adding fluoride ions to drinking water.

Graph 1



Graph 2



- 1 (a) (i) Evaluate the advantages and disadvantages of adding fluoride ions to drinking water.

You should use information from the two graphs in your answer.

[4 marks]

(graph 1 shows) fluoride ions reduce the amount of tooth decay [1 mark]

(graph 1 shows) the effect in reducing tooth decay is greatest for 55-64 year olds [1 mark]

(graph 2 shows) more marked / brittle teeth as fluoride level increases

above points linked together to draw a justified conclusion [1 mark]

Fluoride in water and toothpaste is a controversial issue for some, so this would be a good evaluate question.