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This question is about oxygen atoms. The periodic table on the Data Sheet may help you to answer this question.

Two isotopes of oxygen are oxygen-16 and oxygen-18.



oxygen-16



oxygen-18

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Explain, in terms of particles, how the nucleus of an oxygen-18 atom is different from the nucleus of an oxygen-16 atom.

[2 marks]

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A metal oxide has a relative formula mass (Mr) of 81. The formula of this metal oxide is XO.

X is not the correct symbol for the metal.

The relative atomic mass (Ar) of oxygen is 16.

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Calculate the relative atomic mass (Ar) of metal X.

[2 marks]

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Relative atomic mass (Ar) =

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Use your answer to part 1 and the periodic table on the Data Sheet to name metal X.

[1 mark]

The name of metal X is

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Swimming pools are treated in order to killed microbes. One type of treatment is adding calcium hypochlorite tablets to the water.

Calcium hypochlorite formula is CaCl_2O_2

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Calculate the relative formula mass (M_r) of calcium hypochlorite.

[2 marks]

Relative atomic masses: O = 16; Cl = 35.5; Ca = 40.

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Relative formula mass (M_r) of calcium hypochlorite =

(Total 7 marks)

End of Question
See next page for Data Sheet

