

(b) Scientists classified this microorganism as a species in the domain Archaea.

(i) Describe the information the scientists would have used to classify *M. smithii* into the Archaea domain.

(2)

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(ii) Scientists have identified a similar microorganism in the human mouth.

This microorganism is called *Methanobrevibacter oralis* (*M. oralis*).

Explain how the scientists could confirm that *M. smithii* and *M. oralis* are different species of Archaea.

(3)

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(Total for Question 2 = 9 marks)