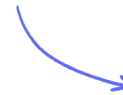


Structured Questions

Ecological Niches

Ecological Niches / Methods of Nutrition / Nutrition in Hominidae: Skills / Nutrition: Adaptations of Organisms / Competition Between Species

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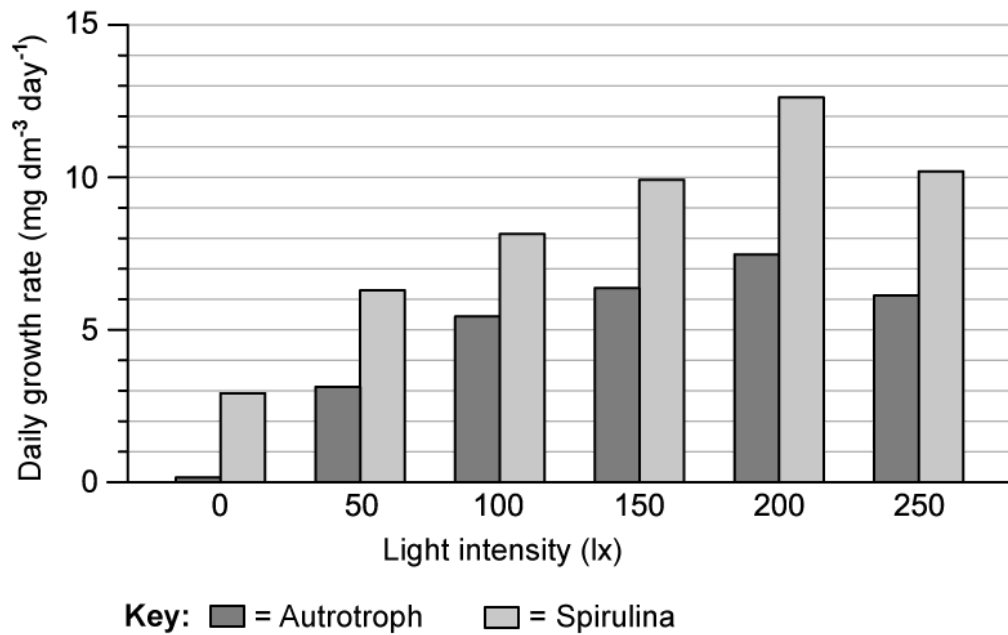
Total Marks

/7

- 1 (a) *Spirulina* (*Athrospira platensis*) is a blue-green alga that is consumed for its nutritional benefits, which are considered to be good for oral health, eye health and maintaining healthy blood pressure, amongst other benefits.

The graph shows the results from an investigation into the optimum growing conditions for *Spirulina*.

Spirulina was grown in a glucose medium and exposed to different intensities of light. The same method was carried out with an autotrophic species of alga.



Explain how the results show that *Spirulina* is a mixotrophic organism.

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(3 marks)

- (b) Compare the growth rate of *Spirulina* and the autotrophic algal species when light intensity was increased from 0 to 200 lx.

.....

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(2 marks)

(c) Suggest how Spirulina may be adapted to function as a mixotroph.

(2 marks)