

36 A student investigated the effect of high temperature on the production of nitrate ions in soil.

Two samples of soil were taken. One sample was heated to 100 °C.

All the nitrate ions were completely removed from both soil samples.

Ammonium ions were then added to both soil samples.

After two weeks, both soil samples were tested for the presence of nitrate ions.

The results are shown.

soil sample	nitrate ions present or absent
not heated to 100 °C	present
heated to 100 °C	absent

Which statement explains the results?

- A** Heating the soil broke down the nitrate ions.
- B** Heating the soil increased the activity of denitrifying bacteria.
- C** Heating the soil killed nitrifying bacteria.
- D** Heating the soil killed nitrogen-fixing bacteria.