

AB 5: Expert C – *Alcanivorax*

Task:

The following text on *Alcanivorax borkumensis* won't be very easy to understand. But don't worry! Work as follows: First read the text on your own. Just try to understand what the text is about. Then talk to the other experts in German: What did they understand? You can look up some words in a dictionary, but don't get carried away, as you don't need to understand every single word! Finally, read the text together once more and answer the following questions:

- a) What do *Alcanivorax borkumensis* feed on?
- b) How can they help to make our lives more convenient?

You may answer in English or German. Give evidence from the text (name the line you are referring to).

Alcanivorax

1 *Alcanivorax borkumensis* is an alkane-degrading marine bacterium which can naturally be found in seawater environments. It is more common in oceanic areas containing petroleum oil (whether from spills, natural fields, or other sources), although it can be found in small amounts in clean water as well. The abundance of
5 *Alcanivorax borkumensis* in oil-affected environments is because these bacteria use the compounds in oil as a source of energy. Unlike most other bacteria, however, they cannot consume more common substances such as sugars or amino acids as a source of energy.

10 *Alcanivorax borkumensis* live and multiply in crude-oil-containing seawater when nitrogen and phosphorus nutrients are available. They are currently thought to be the world's most important oil-degrading organisms and are used quite effectively to fight oil spills all over the world.

Text: S. Reitzenstein, based on en.wikipedia.org/wiki/Alcanivorax, 29.07.2015

a) What do *Alcanivorax borkumensis* feed on?

b) How can they help to make our lives more convenient?
