

STUDENT SHEET 2a

Dissolving sea shells in acid



How might amphipods be affected by ocean acidification?

Summary

This activity demonstrates the ability of an acidic substance (in this case vinegar) to dissolve sea shells.

Equipment needed per group:

- 200 ml of clear vinegar (such as malt vinegar or other pickling vinegar)
- Sea shell
- Appropriate container or beaker

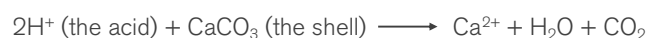
Instructions

1. Pour the vinegar into the container
2. Add the sea shells to the container and observe what takes place
3. Discuss with students what is happening to the sea shells as they react with the acid

The science

Malt vinegar contains acetic acid.

The acid reacts with the calcium carbonate in the shells to form calcium ions, water and carbon dioxide.



Discussion questions

1. What is produced from the dissolution of sea shells in the vinegar?
2. Which compounds cause this reaction?
3. How might a more acidic ocean affect organisms that rely on shells for protection?
4. How might it affect organisms that depend on these animals for food?