Experimental protocol from the video: is the sea getting saltier?

Materials

- Glass
- Cold water
- Salt
- A spoon

Budget

3€ / $3.22 US / £2.55 / $4.46 Australian per person

Introduction

Seawater contains salt from underwater sources or from rivers. The evaporation of water leads in some areas to an increase in salinity, for example in the Mediterranean Sea. So, we can say that global warming is a major cause of the salinisation of the oceans.

Knowing this, do you think that the water can become saltier and saltier?

To answer this question, we will carry out an experiment.

Experimental protocol

Step 1

Fill the glass halfway with water.

Step 2

1. Add a spoonful of salt to the glass of water.
2. Stir with the spoon.

Step 3

1. Add more salt.
2. Stir again.

3. Add more salt until it can no longer dissolve in the water.

Discussion

1. What is happening?
2. What can you observe when the salt no longer dissolves?
3. What happens at the bottom of the glass?

From this experiment, we can see that a certain amount of water can only dissolve a certain amount of salt. If the amount of salt is too large compared to the amount of water, it cannot be dissolved. When this happens, the salt settles at the bottom of the glass because it could not dissolve further. It is called a super saturated salt solution. If we had stopped at the first spoon then we would have been talking about a dilute solution.

- ➔ And what about the amount of salt that our oceans receive on a continuous basis?

Most of the salt is released in the form of natural salt and salt marshes, as we can see here with the salt accumulated at the bottom of the glass.