

		
	<p style="text-align: center;">CHANGING FOR CLIMATE CHANGES</p>	

Experiment 6: Consequences on solubility of CO₂ in warmer sea-water

1. INTRODUCTION

According to the researchers, more than half of the CO₂ absorbed worldwide ends up in the ocean. Krill, plankton and seaweed play a significant role in this. The ocean stores 50 times more CO₂ than the atmosphere and 20 times more than plants on land. So oceans have an important role. But can seawater absorb an infinite amount of CO₂ and does it always work as well?

2. ORIENTATION

What are the consequences on solubility of CO₂ in warmer sea-water?

3. PREPARATION

3.1. Materials:

- 2 test tubes
- Test tube clamp
- Measuring cup
- Hot water bath
- Sparkling water

3.2. Method:

- Fill the measuring cup with sparkling water.

- Heat a test tube in the hot water bath for one minute.
- Place the 2 test tubes (cold and warmed) simultaneously in the measuring cup with sparkling water.

4. RESULTS

Observations:

Observe the gas evolution at the surface of the 2 test tubes

Gas bubbles form around the hot test tube, so the CO₂ in the water is starting to escape.

5. REFLECTION

Can you make the connection between this experiment and the effect of greenhouse gases on the ocean? Remember that if you see more gas-bubbles, this means that the gas is less soluble.

As the water of the ocean warms, the oceans can hold less CO₂, and more is released into the air. This reinforces global warming.

6. e-book

Take several pictures during the experiment. You can also film it.