

Mineral Trapping

Supplies

- Ancient Ocean Water: Sodium silicate solution, 50% $\text{Na}_2\text{SiO}_3(l)$ (5 grams).
- Baking soda, $\text{NaHCO}_3(s)$ (3 grams)
- A container of sand (100 grams) with a lid.
- Three lidded test tubes filled with white vinegar (14 mL each).
- A rack for holding the test tubes.
- A Mason jar with lid that has tubing in it. (CO_2 generator).

Instructions

1. Add 5 mL Ancient Ocean Water to the container of sand.
2. Close the lid.
3. Shake the container so all the sand and solution are well mixed (make sure all the sand is wet).
4. Place 3 grams $\text{NaHCO}_3(s)$ in the Mason jar.
5. Screw the lid onto the Mason jar.
6. Open the sand/solution container.
7. Place the tip of the tubing attached to the Mason jar in the sand container. Press the tip to the bottom of the container settling the sand around it.
8. Close the lid as much as you are able. Seal the rest of the container with the palm of your hand.
9. Using the syringe, introduce 40 mL vinegar into the Mason jar to produce CO_2 .
10. Maintain the seal and CO_2 flow for 5 minutes.

Anticipated Result

Actual Result
