

Name: _____ Date: _____ Class: _____

Student Worksheet

Catalytic Conversions: Independent Inquiry

Avoid splashing hydrogen peroxide into the eyes or onto other areas of the body. Any spills of calcium chloride on the skin should be immediately flushed with water

Materials

- 10 ml of alginate-glass MnO₂ mixture
- 30 ml 5% CaCl₂ solution
- 3% H₂O₂ solution
- stirring rod
- plastic syringe or pipette
- petri dish
- Vernier caliper
- hand lens or stereomicroscope
- plastic screen or cheesecloth
- tap water
- paper towel
- blank data table (sphere)
- blank data table (cylinder)

Procedure

Drop the alginate mixture into 30 ml 5% CaCl₂ solution.

Challenge #1

Make 2 spheres & 2 cylinders.

Challenge #2

Make 10 spheres and 10 cylinders and measure them with calipers to check for size and uniformity.

Challenge #3

Sort the alginate structures into groups of similar size and shape. Place them into a petri dish half filled with 3% hydrogen peroxide. Then look at the structures in the dish under greater magnification. Describe what you now see and identify questions to ask.

SAVE the structures you made today because we will use them in the next lab!