

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 MnO<sub>2</sub> mixture
- 30 ml 5% CaCl<sub>2</sub> solution
- 3% H<sub>2</sub>O<sub>2</sub> 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% CaCl<sub>2</sub> 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!**