

Students Name

10/11/2012

Partner 1, Partner 2

Class Period 5

Change of Phase Lab

Purpose

What happens to energy and temperature when matter changes phase?

Materials

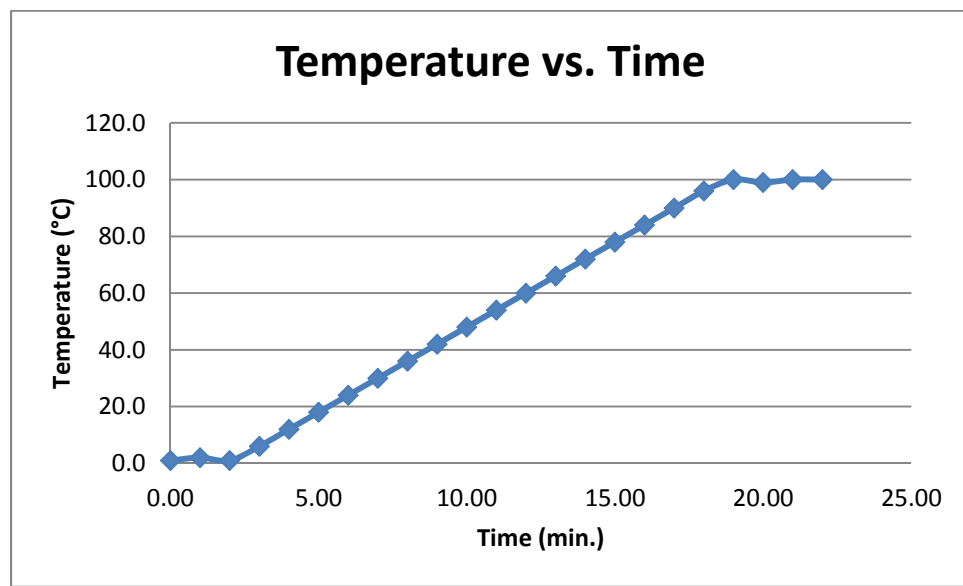
- 250 ml beaker
- Ice cubes
- Water
- Thermometer
- Stop watch
- Ring stand
- Hot Plate
- Stirring rod
- Thermometer Clamp

Procedure

1. Half fill a beaker with cold water and ice. Allow to sit for 2 minutes.
2. Measure and record the temperature of the ice-water mixture
3. Continue to record the temperature every minute for ____ minutes
4. Place the beaker of ice-water on the hot plate and turn the hot plate onto high.
5. Read the temperature of the mixture every minute and record
6. Continue to heat and record every minute until the water boils. Take _____ more temperature recordings while the water is boiling.

Observations/Data

Time (min.)	Temperature (°C)
0.00	1.0
1.00	2.0
2.00	1.0
3.00	6.0
4.00	12.0
5.00	18.0
6.00	24.0
7.00	30.0
8.00	36.0
9.00	42.0
10.00	48.0
11.00	54.0
12.00	60.0
13.00	66.0
14.00	72.0
15.00	78.0
16.00	84.0
17.00	90.0
18.00	96.0
19.00	100.0
20.00	99.0
21.00	100.0
22.00	100.0



Questions

2. Describe the shape of the graph.

The graph is horizontal in the beginning at 0 °C and then slopes up to 100 °C where it does horizontal again. The heat of fusion is at the 0 °C horizontal line. The heat of vaporization is at the 100 °C horizontal line.

3. Are any parts horizontal? When?

The graph is horizontal at 0 °C and 100 °C.

4. What happens to the temperature during this time?

The temperature does not change but heat is being put into the system.

5. What is occurring in the beaker at this time?

The molecules are being broken apart so the substance can change states from solids, to liquids to gas.

6.

7.

Conclusion

Solid water changed phase from a

Liquid water changed phase from a

Two sources of error were

Evaluation

This lab was.... I wrote at least 2 sentences in this section.