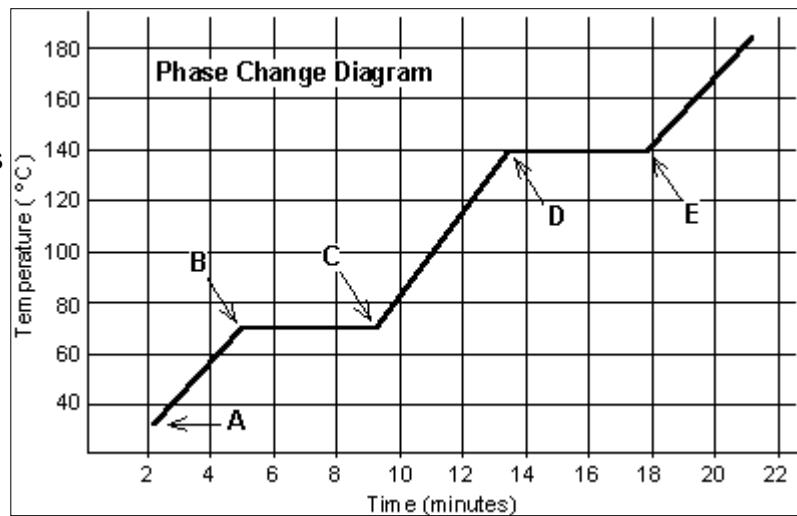


## Phase Changes Assignment #2

Date: \_\_\_\_\_ Name: \_\_\_\_\_

The graph was drawn from data collected as a substance was heated at a constant rate. Use the graph to answer the following questions. Circle the correct word.

At **point A**, the beginning of observations, the substance exists in a solid state. With each passing minute, ( HEAT / TEMPERATURE ) is added to the substance. This causes the molecules of the substance to move ( MORE/ LESS ) rapidly which we detect by a ( RISE / FALL ) in the temperature of the substance. At **point B**, the temperature of the substance is ( 5°C / 70°C ) The solid begins to ( BOIL / MELT ). At point C, the substance is completely in a ( SOLID / LIQUID) state. The energy put to the substance between minutes 5 and 9 was used to convert the substance from a (SOLID / LIQUID ) to a ( SOLID / LIQUID). This heat energy is called the **latent heat of fusion**.



Between 9 and 13 minutes, the added energy increases the ( ENERGY / TEMPERATURE ) of the substance. During the time from **point D to point E**, the liquid is ( MELTING / BOILING ). By **point E**, the substance is completely in the (LIQUID / GAS ) phase. The energy put to the substance between minutes 13 and 18 converted the substance from a ( LIQUID / GAS ) state. This heat energy is called the **latent heat of vaporization**. Beyond **point E**, the substance is still in the (LIQUID / GAS ) phase, but the molecules are moving (FASTER / SLOWER ) as indicated by the increasing temperature.

**QUESTION:** Based on the graph and the table below, what is the substance? Support your answer with evidence.

Substance	Melting point	Boiling point
Bolognium	20 °C	100 °C
Unobtainium	40 °C	140 °C
Foosium	70 °C	140 °C