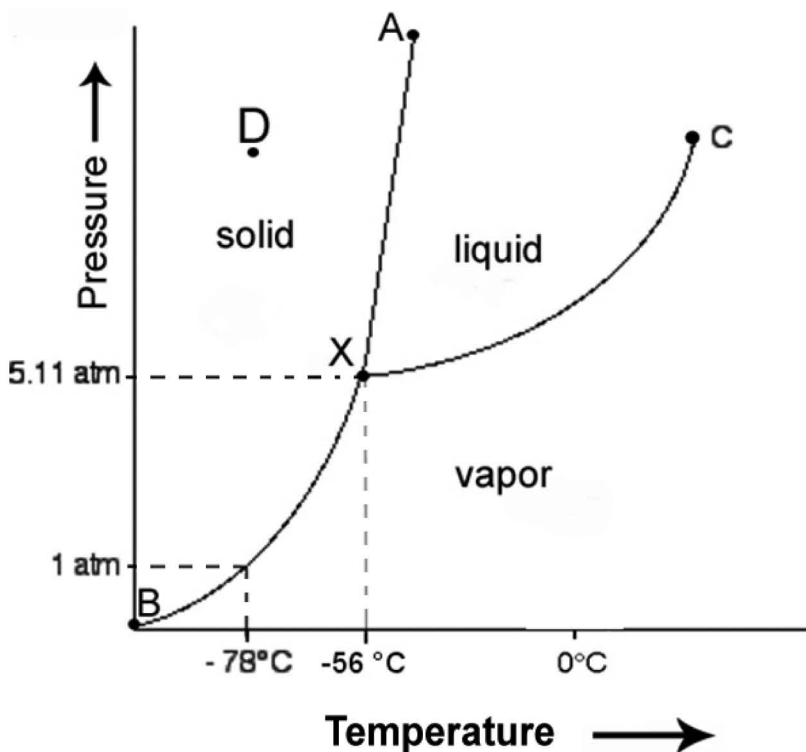


General Chemistry
Mr. MacGillivray
Quiz #28:
Phase Diagrams

Phase Diagram for CO₂



1. . Given the phase diagram for carbon dioxide, illustrated above, state what phase or phases of CO₂ is/are present at each of the following temperature-pressure conditions. Circle the answer(s).

- | | | | |
|---|------------------------------------|------------------------------------|------------------------------------|
| a) at any point on between A and X on curve AX: | <input checked="" type="radio"/> S | <input type="radio"/> L | <input type="radio"/> G |
| b) at point X | <input checked="" type="radio"/> S | <input checked="" type="radio"/> L | <input checked="" type="radio"/> G |
| c) at 0 °C and 5.11 atm | <input type="radio"/> S | <input type="radio"/> L | <input checked="" type="radio"/> G |
| d) at -78 °C and 1 atm | <input checked="" type="radio"/> S | <input type="radio"/> L | <input checked="" type="radio"/> G |

2. Based on the phase diagram above, what effect would each of the following changes have on a sample of CO₂ at point D? Fill in the blanks.

- a) increasing the temperature to 0 °C at constant pressure: It changes from S to L
- b) decreasing the pressure to 0.300 atm at constant temp. : It changes from S to G

3. When CO₂ is a solid it is called "dry ice". What type of intermolecular forces of attraction is responsible for holding CO₂ molecules together with other CO₂ molecules in dry ice? Circle the answer.

Intermolecular forces of attraction

Intramolecular forces of attraction