

Question #75013, Chemistry / General Chemistry

What is the freezing point of a 0.94 m solution of glucose, $C_6H_{12}O_6$, in water? (K_f for water is $1.858\text{ }^\circ\text{C}/m$)

- a. $0.22\text{ }^\circ\text{C}$
- b. $0.505\text{ }^\circ\text{C}$
- c. $-1.74\text{ }^\circ\text{C}$
- d. $-0.22\text{ }^\circ\text{C}$
- e. $-0.89\text{ }^\circ\text{C}$

Solution

$$\Delta T = K_f \cdot m$$

$$m = C/p$$

$$\Delta T = 1.858 \cdot 0.94 = 1.74\text{ }^\circ\text{C}$$

Answer

- c. $-1.74\text{ }^\circ\text{C}$

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