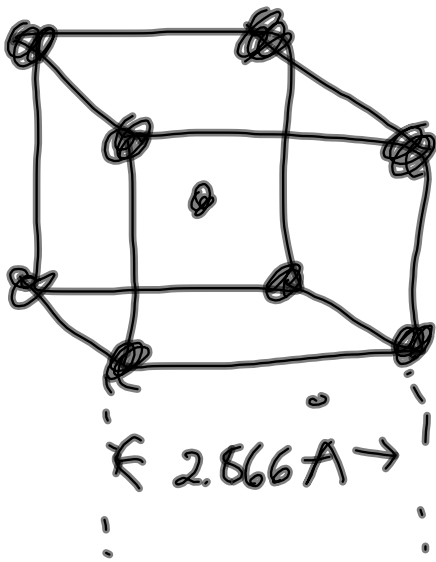


$$\ln\left(\frac{P_2}{P_1}\right) = \frac{\Delta H_{\text{vap}}}{R} \left(\frac{1}{T_1} - \frac{1}{T_2} \right)$$

$$R \cdot \ln\left(\frac{P_2}{P_1}\right) = R \cdot \left(\frac{\Delta H_{\text{vap}}}{R} \left(\frac{1}{T_1} - \frac{1}{T_2} \right) \right)$$

$$\Delta H_{\text{vap}} \left(\frac{1}{T_1} - \frac{1}{T_2} \right) = R \cdot \ln\left(\frac{P_2}{P_1}\right)$$

$$\Delta H_{\text{vap}} = \frac{R \cdot \ln\left(\frac{P_2}{P_1}\right)}{\left(\frac{1}{T_1} - \frac{1}{T_2} \right)}$$



$$d = \frac{M}{V}$$

$$V = (2.866 \times 10^{-8} \text{ cm})^3$$

$$= 2.354 \times 10^{-23} \text{ cm}^3$$

$$\frac{55.85 \text{ g}}{1 \text{ mol}} \left(\frac{1 \text{ mol}}{6.022 \times 10^{23} \text{ atoms}} \right) \left(\frac{2 \text{ atoms}}{1 \text{ unit cell}} \right)$$

$$= 1.855 \times 10^{-22} \frac{\text{g}}{\text{unit cell}}$$

$$d = \frac{M}{V} = \frac{1.855 \times 10^{-22} \text{ g}}{2.354 \times 10^{-23} \text{ cm}^3}$$

$$= 7.880 \frac{\text{g}}{\text{cm}^3}$$