

$$R = 8.314 \text{ J}\cdot\text{K}^{-1}\cdot\text{mol}^{-1}$$

$$P_{\text{atm}} = 101.325 \text{ kPa}$$

$$P = 60.4 \text{ kPa}$$

$$t = 60.0 \text{ }^{\circ}\text{C}$$

$$T = 333.15 \text{ K}$$

$$M(\text{CCl}_4) = 12 + 35.5 \cdot 4 = 154 \text{ g/mol} = 0.154 \text{ kg/mol}$$

$$\Delta H_{\text{boil}} = 29.82 \text{ kJ/mol} = 29820 \text{ J/mol} = 193636 \text{ J/kg}$$

$$T_{\text{boil}} = \left(\frac{1}{333.15} - \frac{8.314 \cdot \ln\left(\frac{60.4}{101.325}\right)}{193636 \cdot 0.154} \right)^{-1}$$

$$T_{\text{boil}} = \left(\frac{1}{333.15} - \frac{8.314 \cdot \ln(0.5961)}{29819.9} \right)^{-1}$$

$$T_{\text{boil}} = \left(\frac{1}{333.15} - \frac{8.314 \cdot (-0.5173)}{29819.9} \right)^{-1}$$

$$T_{\text{boil}} = \left(\frac{1}{333.15} + \frac{4.3}{29819.9} \right)^{-1}$$

$$T_{\text{boil}} = (0.003002 + 0.000144)^{-1}$$

$$T_{\text{boil}} = (0.003146)^{-1}$$

$$T_{\text{boil}} = \left(\frac{1573}{500000} \right)^{-1}$$

$$T_{\text{boil}} = \frac{500000}{1573} = 317.86 \text{ K}$$

$$t = 44.71 \text{ }^{\circ}\text{C}$$

Answer provided by AssignmentExpert.com