

$$\Delta G^\circ = \Delta H^\circ - T \cdot \Delta S^\circ$$

$$\Delta H_r^\circ = [-73,22] - [-95,35] = 22,13 \frac{\text{kcal}}{\text{mol}} \cdot \frac{4184 \text{ cal}}{1 \text{ kcal}} \cdot \frac{1}{1000} = 92503,4 \frac{\text{J}}{\text{mol}}$$

$$\Delta S_r^\circ = [399,7 + 222,9] - [352,7] = 181,9 \frac{\text{J}}{\text{mol} \cdot \text{K}}$$

$$\Delta G^\circ = 92503,4 - 298 \cdot 181,9 = 38297,2 \frac{\text{J}}{\text{mol}}$$

$$\Delta G = -R \cdot T \cdot \ln K_p \longrightarrow K_p(298 \text{ K}) = 1,94 \cdot 10^{-7}$$

$$\ln \frac{K_p(523 \text{ K})}{K_p(298 \text{ K})} = \frac{\Delta H^\circ}{R} \cdot \left[\frac{1}{298} - \frac{1}{523} \right]$$

$$\ln \frac{K_p(523 \text{ K})}{1,94 \cdot 10^{-7}} = \frac{92503,4}{8,314} \cdot \left[\frac{1}{298} - \frac{1}{523} \right] \longrightarrow K_p(523 \text{ K}) = 1,835$$