

8)  $^1\text{H}^{35}\text{Cl}$ -den oinamitto taajuusltaan on  $2990,95 \text{ cm}^{-1}$  kooda. Kalkuleta  
 jousen jousvakautta.

$$\left. \begin{aligned} \bar{\nu} &= \frac{\omega}{2\pi c} \\ \omega &= \sqrt{\frac{k}{\mu}} \end{aligned} \right\} \bar{\nu} = \frac{1}{2\pi c} \cdot \sqrt{\frac{k}{\mu}} \Rightarrow k = (2\pi c \bar{\nu})^2$$

$$\mu = \frac{m(^1\text{H}) \cdot m(^{35}\text{Cl})}{m(^1\text{H}) + m(^{35}\text{Cl})} = \frac{1,67 \cdot 10^{-27} \cdot 5,8 \cdot 10^{-26}}{1,67 \cdot 10^{-27} + 5,8 \cdot 10^{-26}} = 1,72 \cdot 10^{-27} \text{ kg}$$

$$k = 1,72 \cdot 10^{-27} (2\pi \cdot 2,998 \cdot 10^8 \cdot 2990,95)^2 = 545,97 \frac{\text{kg}}{\text{s}^2} \left( \frac{\text{N}}{\text{m}} \right)$$