

$$b) m = \frac{4 \text{ HNa}_2\text{O}}{\text{Na}} = \frac{4 \times 62}{6,0 \cdot 10^{23}} = 4,12 \cdot 10^{-22} \text{ g}$$

$$\rho_3 = 2,27$$

$$r_{\text{Na}^+} = \frac{\sqrt{3}}{4} \sqrt[3]{\frac{4 \times 62}{2,27 \times 6,02 \cdot 10^{23}}} - r_{\text{O}_2}$$

$$r_{\text{Na}^+} = 2,44 \cdot 10^{-8} \text{ m} = 24,4 \text{ nm}$$

$$r_{\text{Cl}^-} = \frac{1}{2} \sqrt[3]{\frac{4 \times 58,5}{2,17 \times 6,02 \cdot 10^{23}}} - r_{\text{Na}^+}$$

$$r_{\text{Cl}^-} = 3,88 \cdot 10^{-9} \text{ m} = 3,88 \text{ nm}$$

$$r_{\text{Cs}} = \frac{\sqrt{3}}{2} \sqrt[3]{\frac{M_{\text{CsCl}}}{N_A \rho_1}} - r_{\text{Cl}^-}$$

$$r_{\text{Cs}} = \frac{\sqrt{3}}{2} \sqrt[3]{\frac{168,4}{6,02 \cdot 10^{23} \times 3,99}} - r_{\text{Cl}^-}$$

$$r_{\text{Cs}} = 3,18 \cdot 10^{-8} \text{ m} = 31,8 \text{ nm}$$