Obecná chemie BDÚ #2

30 ml 20% NaOH ($\rho = 1{,}120$ g/cm³)
V_1 w_1 ρ_1

+ 200 ml H_2O ($\rho = 1{,}00$ g/cm³) → ? (1,05 g/cm³)
V_2 $w=0$ ρ_2 ρ_3

$m_1 w_1 + m_2 w_2 = m_3 w_3$

$m_1 + m_2 = m_3$

$m = V \cdot \rho$ ⇒ $\rho_1 V_1 w_1 + \rho_2 V_2 w_2 = (\rho_1 V_1 + \rho_2 V_2) w_3$ ($w_2 = 0$)

$$\Rightarrow w_3 = \frac{\rho_1 V_1 w_1}{\rho_1 V_1 + \rho_2 V_2} = \frac{1{,}120 \cdot 30 \cdot 0{,}2}{100 \cdot 200 + 1{,}120 \cdot 30} =$$

$$= \frac{7{,}2}{236} \doteq 0{,}0305$$

⇒ **3 %** roztok NaOH