

194. Koliko je grama 98% sumporne kiseline, gustine  $1,8\text{g/cm}^3$  potrebno za pripremanje  $500\text{cm}^3$  rastvora količinske koncentracije  $0,4\text{mol/dm}^3$  ?

$$? \text{ g } 98\% \text{H}_2\text{SO}_4, \rho = 1,8 \frac{\text{g}}{\text{cm}^3}$$

$$V = 500\text{cm}^3, c = 0,4 \frac{\text{mol}}{\text{dm}^3}$$

---

$$V = 0,5\text{dm}^3$$

$$c = 0,4 \frac{\text{mol}}{\text{dm}^3}$$

---

$$n = c \cdot V$$

$$n = 0,4 \frac{\text{mol}}{\text{dm}^3} \cdot 0,5\text{dm}^3$$

$$n = 0,2\text{mol}$$

$$1\text{molH}_2\text{SO}_4 \rightarrow 98\text{g}$$

$$0,2\text{molH}_2\text{SO}_4 \rightarrow x\text{g}$$

---

$$x = 19,6\text{gH}_2\text{SO}_4$$

$$98\% \text{H}_2\text{SO}_4$$

$$98\text{gH}_2\text{SO}_4 \rightarrow 100\text{g}(98\% \text{rastvora})$$

$$19,6\text{gH}_2\text{SO}_4 \rightarrow x\text{g}(98\% \text{rastvora})$$

---

$$x = \frac{19,6\text{gH}_2\text{SO}_4 \cdot 100\text{g}(98\% \text{rastvora})}{98\text{g}(98\% \text{rastvora})}$$

$$x = 20\text{g}(98\% \text{rastvora})$$