

193. Koliko je  $\text{cm}^3$  98% sumporne kiseline, gustine  $1,8\text{g}/\text{cm}^3$  potrebno za pripremanje  $2\text{dm}^3$  rastvora količinske koncentracije  $0,2\text{mol}/\text{dm}^3$  ?

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

$$V = 2\text{dm}^3, c = 0,2 \frac{\text{mol}}{\text{dm}^3}$$

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$$0,2\text{molH}_2\text{SO}_4 \rightarrow 1\text{dm}^3$$

$$x\text{molH}_2\text{SO}_4 \rightarrow 2\text{dm}^3$$

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$$x = 0,4\text{molH}_2\text{SO}_4$$

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

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

$$\rho = \frac{m}{V}$$

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$$V = \frac{m}{\rho}$$

$$V = \frac{100\text{g}}{1,8 \frac{\text{g}}{\text{cm}^3}}$$

$$V = 55,5\text{cm}^3$$

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

$$98\text{gH}_2\text{SO}_4 \rightarrow 55,5\text{cm}^3(98\%\text{rastvora})$$

$$1\text{molH}_2\text{SO}_4 \rightarrow 55,5\text{cm}^3(98\%\text{rastvora})$$

$$0,4\text{molH}_2\text{SO}_4 \rightarrow x\text{cm}^3(98\%\text{rastvora})$$

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$$x = 22,2\text{cm}^3(98\%\text{rastvora})$$