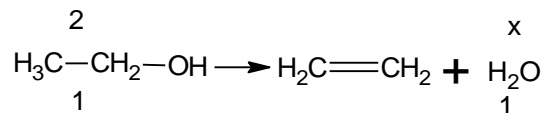


Se deshidrateaza 92 grame alcool etilic utilizand 400 de grame solutie 78.4% acid sulfuric. Solutia de acid rezidual obtinuta este neutralizata cu o solutie de NaOH. Ce cantitate de solutie de NaOH este necesara pentru a se obtine in final o solutie de 41% Na<sub>2</sub>SO<sub>4</sub> ( sulfat de sodiu)? !.

$$n_{\text{CH}_3\text{-CH}_2\text{-OH}} = \frac{m}{M} = \frac{92}{46} = 2 \text{ moli}$$

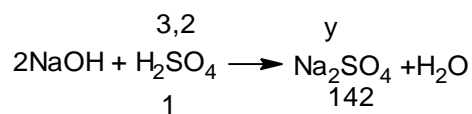


$x=2$  moli H<sub>2</sub>O rezultata din reactie

$$m_{\text{H}_2\text{O}} = n \cdot M_{\text{H}_2\text{O}} = 2 \cdot 18 = 36 \text{ g}$$

$$c = \frac{m_d}{m_s} \cdot 100 \Rightarrow m_d = \frac{c \cdot m_s}{100} = \frac{78,4 \cdot 400}{100} = 313,6 \text{ g H}_2\text{SO}_4$$

$$n_{\text{H}_2\text{SO}_4} = \frac{313,6}{98} = 3,2 \text{ moli}$$



$$y = 454,4 \text{ g Na}_2\text{SO}_4$$

Din formula concentratiei procentuale:

$$c = \frac{m_d}{m_s} \cdot 100 \Rightarrow m_{s_{\text{Na}_2\text{SO}_4}} = \frac{m_d}{c} \cdot 100 = 1108,3 \text{ g (solutia finala)}$$

$$m_{s_{\text{H}_2\text{SO}_4}} + m_{\text{H}_2\text{O din deshidratare}} + m_{\text{NaOH}} = m_{s_{\text{Na}_2\text{SO}_4}}$$

$$400 + 36 + m_{s_{\text{NaOH}}} = 1108,3$$

$$m_{s_{\text{NaOH}}} = 672,3 \text{ g}$$