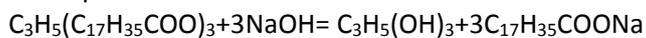


50.0 mL of 6.0 M NaOH provides an excess of NaOH for the reaction. How many mLs of 6.0 M NaOH are actually needed to react with 10.0g of triglyceride?

**Solution:**

The equation of reaction is



The molar mass of triglyceride  $\text{M}(\text{C}_3\text{H}_5(\text{C}_{17}\text{H}_{35}\text{COO})_3)$  is 890 g/mol, so in 10.0g of its are

$$\frac{10.0}{890} = 0.011 \text{ mole.}$$

From the equation of reaction one mole of triglyceride reacts with three moles of NaOH. So, the quantity moles of NaOH which actually needed to react is:  $0.011 \cdot 3 = 0.033$  moles. These

quantity moles of NaOH are consist in  $\frac{0.033}{6.0 \cdot 1000} = 5.5\text{mL}$

**Answer:**

The volume of 6 M NaOH is 5.5 mL.