

### 11.9 Determination of acid value

Acid value gives the measure of proportion of free fatty acids (FFA). It can be defined as mg of potassium hydroxide (KOH) required to neutralize free fatty acids present in 1 g of sample. A known quantity of (5.1000 ± 0.1000 g) sunflower acid oil was dissolved in 50 ml of neutral solvent (ether: 95 per cent alcohol: phenolphthalein = 25: 25: 1 ml and neutralized with N/10 NaOH). The contents were titrated against 0.1 N KOH in the presence of phenolphthalein as indicator. End point was the appearance of a faint pink color.

The acid value was then calculated by using the formula:

$$\text{Acid value (mg KOH/g)} = \frac{\text{Titre value} \times \text{Normality of KOH} \times 56.1}{\text{Weight of sample}}$$

**Reference:** AOAC method 969.17, 16<sup>th</sup> edition 1995.