

# **ACID – BASE TITRATION**

**Titration of a weak acid with strong base**

**Titration of 0.1M Acetic acid with 0.1M**  
**Sodium hydroxide(NaOH)**

**CH<sub>3</sub>COOH**

\*Percentage %99

\*Specific gravity 1.05

\*Molecular weight 60.05

$$M = (1.05 \times 0.99 \times 1000) / 60.05$$

$$= 17.31$$

$$M_1 V_1 = M_2 V_2$$

$$17.31 \times V_1 = 0.1 \times 250$$

$$V_1 = 1.44 \text{ ml}$$

# Procedure

1. In a flask, put 10ml of acetic acid by using a pipette, then add 3 drops of phenolphthalein as an indicator by using a dropper .
2. Fill burette with NaOH as a standard solution .
3. Start your titration as shown below until you have first pink color in the flask.
4. Flask was colorless at the beginning of titration ,as acetic acid is a colorless acid and phenolphthalein is colorless in acidic medium as discussed before .



$$M_{\text{acid}} \times V_{\text{acid}} = M_{\text{base}} \times V_{\text{base}}$$

$$0.1 \times 11 = M \times 10$$

$$M = 0.11$$

