**Lab (8)**

**Determination of sodium benzoate in fruit juice**

**Method**

1- Weight 10 g of sample into a beaker and add 1 ml of 10% NaOH solution and 12 g NaCl.

2- Add sufficient water to bring the vol. up to about 50 ml and let it stand for 30 min. with frequent shaking.

3- Add 1 drop of ph.ph (the color will change), add drops of HCl until the color change (disappear), then add excess 3 ml HCl.

4- Add 25 ml of chloroform.

5- Transfer into separator funnel. Let it stand for 20 min with frequent shaking.

6- Transfer 12.5 ml of the chloroform layer (lower layer) into a conical flask and evaporate of the chloroform on a steam bath.

7- Add 50 ml of 50% ethanol solution.

8- Titrate with 0.05 M NaOH add 1 drops of ph.ph as indicator (colorless in acidic).

9- Calculate the amount of sodium benzoate in the sample.

**Calculations:**

1 ml of 0.05M NaOH 0.0072 g sodium benzoate

 ……… ml NaOH ? gm of sodium benzoate

% of sodium benzoate = (wt. of sodium benzoate / wt. of sample) X 100

- Normal range not exceed 0.13 %