

EXPERIMENT 3 DETERMINATION OF THIAMINE CONTENT OF GIVEN SAMPLE TABLETS

Objectives:

At the end of this session you should be familiar with the following:

- i) The theory of acid-base indicators.
- ii) The mole concept.
- iii) The principles involved in calculations in volumetric analysis.

Task:

In today's laboratory session you are required to perform the following:

1. Determine the thiamine content in the tablets.

Procedure:

- 1) Accurately determine mass of tablets.
- 2) Crush tablets and transfer quantitatively into a conical flask.
- 3) Add 25 mL distilled water, and shake.
- 4) Allow mixture to stand for 15 minutes.
- 5) Add six drops bromothymol blue indicator and titrate with standardized sodium hydroxide.

Colour change: Yellow to bluish green end point

1 mole thiamine mononitrate : 1 mole NaOH

OR

1 mole thiamine hydrochloride : 1 mole NaOH

See bottle for correct active ingredient

REPORTING THE RESULTS

Calculate the thiamine content in the sample tablets.