

Aim 25

To Detect the Free Fatty Acids in Lipids

Introduction

Titration of sample with alkali using phenolphthalein as an indicator can be used to detect the presence of free fatty acids in lipid sample. The presence of free fatty acids is indicated by disappearance of pink colour in alkaline solution.

Requirements

1. Flask
2. Burette
3. Phenolphthalein as an indicator – 1%
4. Lipid sample (Olive oil, ghee, butter, dissolved in 50% alcohol).
5. N NaOH (Standardized)

Procedure

1. 10 ml of 0.1 N NaOH is taken in flask and two drops of phenolphthalein is then added.
2. Pink colour solution is obtained.
3. Fill the burette with test solution.
4. The test solution from burette is added into the flask in dropwise manner.
5. Shake the contents of the flask properly.
6. Addition should be done till disappearance of pink colour is observed. Note the volume used till the disappearance of pink colour.

7. Repeat the same with other lipid samples.
8. Note down the volume of test samples used till the disappearance of pink colour.
9. Compare the results.

Observation Table

Sample	Initial reading	Final reading	Volume of sample used (ml)

Results

The test samples which are used in lesser amount are found to have higher amount of fatty acids.