

## **STANDARD OPERATING PROCEDURE – Determination of pH**

### **INTRODUCTION**

pH is a measurement of hydrogen ion activity. It provides relative acidity or alkalinity values for samples at a given temperature. During the production of some cultured products, samples of the product are taken during the intermediate steps of production and tested for their pH. These readings are then used to determine when production can proceed to the next step.

### **MATERIALS**

1. Supplies
  - a. pH meter and electrode
  - b. Calibrating buffer solutions
  - c. Electrode storage solution
  - d. Sample of product
  - e. Rinsing solution
2. Cautions
  - a. Be careful not to splash buffer solutions or samples onto skin or into eyes.
  - b. The pH electrode is fragile. It should be handled with great care and kept clean at all times.

### **PROCEDURE**

1. Turn the pH meter on at least one half hour before use to allow it to stabilize.
2. Referring to the owner's manual, calibrate the pH meter before each use with fresh buffer solutions. Rinse and pat electrode dry between each reading.
3. Take a homogeneous sample of the product to be tested
4. Gently set electrode into sample
5. Push meter button
6. Read result
7. Remove electrode from sample, rinse and pat dry.
8. Turn off pH meter
9. Store electrode upright in electrode storage solution when not in use.

### **RECORD KEEPING**

1. Results from the pH determinations are recorded on the daily production sheets.

### **REFERENCES**

1. pH meter owner's manual.
2. Standard Methods for the Examination of Dairy Products  
Published by the American Public Health Association  
[www.apha.org](http://www.apha.org)

The following individual is responsible for implementation of this SOP and has the overall authority on-site:

Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_