

STANDARD OPERATING PROCEDURE – Sample Collection

INTRODUCTION

Samples of products are routinely collected for analysis. This must be done in a manner that ensures the microbial and physical integrity of the sample as well as prevents contamination of the product being sampled.

MATERIALS

1. Supplies
 - a. Sample bottles
 - b. Sampling instruments
 - c. Thermometer
 - d. Sanitizing solutions (hypochlorite and / or iodine based)
 - e. Chlorinated alkaline detergent
2. Hazards
 - a. Corrosive damage to eyes and skin from sanitizer. Wear goggles and gloves when using the concentrate. Avoid breathing the fumes.

PROCEDURE

1. General procedure
 - a. Hands should be clean and dry.
 - b. Product temperature should be determined and recorded at each sampling location.
 - c. Provide a temperature control at the first sampling location. Label this with the time, date, temperature and the collector's identification.
 - d. Handle sample containers aseptically.
 - e. Do not hold containers over the product when transferring the sample to the container.
 - f. Do not fill sample container more than $\frac{3}{4}$ full.
 - g. Immediately refrigerate sample.
2. Collecting samples from sampling-cocks:
 - a. Thoroughly agitate the product to be sampled.
 - b. Attach a bag of sanitizing solution to the sampling-cock. Hold the bag tightly around the body of the valve and force the sanitizing solution in and out of the sampling-cock for at least 60 seconds.
 - c. Flush the sampling-cock by drawing off and discarding a small amount of product.
3. Collecting samples from vats and tanks:
 - a. Thoroughly agitate the product to be sampled.
 - b. Sanitize a clean dipper by submerging it in a hypochlorite solution that is not less than 200 ppm available chlorine for at least 60 seconds.
 - c. Rinse dipper at least two times with product before transferring sample.
 - d. Dipper should extend 6 to 8 inches into the product.
 - e. After each use, rinse the dipper in tap water and clean it with a chlorinated alkaline detergent.
4. Collecting samples of packaged finished products:
 - a. Randomly select representative samples of finished products.
 - b. Or, aseptically transfer a representative portion of the finished product to a sterile sample container.

5. Sample storage:
 - a. Maintain sample temperature at 32° to 40°F. Do not freeze.
 - b. Protect against contamination. If ice is used as the refrigerant, ensure that the sample level is slightly below that of the ice. If ice water is used as the refrigerant, maintain the water and sample level the same.

REFERENCES

1. Standard Methods for the Examination of Dairy Products
Published by the American Public Health Association
www.apha.org
2. Pennsylvania Department of Agriculture publications:
 - a. BFSLS 427 Dairy Plant Sampling – Raw and Pasteurized Milk and Frozen Desserts
 - b. Cultural-1-Rev. Cultural Procedures – General Requirements

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

Name: _____ Title: _____ Date: _____