DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
FOOD AND DRUG ADMINISTRATION

MILK LABORATORY EVALUATION FORM

LABORATORY	
LOCATION	LAB #
DATE	X = DEVIATION O = NOT USED U = UNDETERMINED NA = NOT APPLICABLE

PASTEURIZED MILK CONTAINERS
[Unless otherwise stated all tolerances are ±5%]

1. Laboratory Requirements
- a. Record time and date when samples received ..... _____
- b. Record time and date when samples examined ..... _____

RINSE METHOD

APPARATUS

2. See Cultural Procedures, items 1-23 ..... _____
3. Adding Rinse Solution to Containers ..... _____
- a. Sterile hypodermic syringes (capacity 20 or 100 mL) and needles ..... _____
- b. Or, sterile pipets ..... _____
- c. Or, sterile automatic syringe ..... _____
- d. Or, sterile graduate cylinder ..... _____
- e. Or, pre-dispensed dilution bottles or tubes with rinse solution, volumes checked as in CP item 28i ..... _____

MATERIALS

4. See Cultural Procedures, items 24-32 ..... _____
5. Rinse Solutions, see CP items 27 i-k ..... _____
6. Ethyl Alcohol, 70% ..... _____
7. Plastic Tape ..... _____

PROCEDURE

8. Identify Plates (see SPC, item 4) ..... _____
9. Rinse Solution Volumes for Collection of Surface Rinse Samples ..... _____
- a. 20 mL for ½ pints (236 mL), pints (473 mL), and quarts (946 mL) ..... _____
- b. 50 mL for ½ gallons (1892 mL) ..... _____
- c. 100 mL for gallons (3784 mL) or larger ..... _____
- d. Containers less than 100 mL use swab method, see items 19 - 34 ..... _____

10. Collection of Surface Rinse Samples ..... _____
- a. Firm walled paper containers, sealed on line ..... _____
  1. Swab top of containers with 70% alcohol ..... _____
  2. Add required amount of rinse solution to each container by injection and seal puncture with plastic tape ..... _____
  3. Vigorously shake container length-wise 10 times, holding container horizontally ..... _____
  4. Each shake a complete back and forth movement of about 8 in ..... _____
  5. Turn container 90° and repeat horizontal shaking treatment ..... _____
  6. Turn container 90° twice more and repeat horizontal shaking ..... _____
  7. Grasp container and swirl 20 times in a small circle while upright (top up) ..... _____
  8. Invert (top down) and repeat swirling of container 20 times ..... _____
  9. Stand upright and allow to drain for 1 min ..... _____
- b. Plastic capped containers (submitted with caps) ..... _____
  1. Swab top of container with 70% alcohol when appropriate ..... _____
  2. Add required amount of rinse solution by aseptically removing cap, pouring in solution without touching the top and replace cap ..... _____
  3. Complete rinse procedure as described in 10a 3/9 above ..... _____
- c. Flexible-walled containers/bags ..... _____
  1. Add 100 mL aseptically by swabbing an area of tube adjacent to liner with 70% alcohol; introduce rinse by syringe and seal puncture with plastic tape ..... _____
  2. Place container/bag on smooth, clean, firm horizontal surface as flat as its construction permits ..... _____
  3. With hands or roller, move rinse solution back and forth 10 times, contacting all surfaces completely ..... _____
  4. Lift liner and hang with “fill tube” down to permit rinse solution to collect for one minute ..... _____
  5. Transfer rinse solution to sterile container by cutting “fill tube” with sterile scissors ..... _____

11. Sample Measurements ..... _____
- a. As described in SPC, item 6 and 7 except ..... _____
- b. For Residual Bacterial Count (RBC), plate the following amounts per container ..... _____
  1. ½ pint: 5 mL in two plates ..... _____
  2. Pint and larger: 2 mL in a single plate ..... _____
- c. For Residual Coliform Count (RCC), distribute 10 mL of remaining rinse solution among three plates ..... _____

12. Plating (See SPC, item 13) ..... _____
13. Controls (See SPC, item 14) ..... _____
14. Incubation (See SPC, item 15) ..... _____
15. Counting Colonies (See SPC, items 16-18) ..... _____
16. Confirmation Test (See SPC, item 18e) ..... _____
17. Recording Counts ..... _____
- a. Count obtained from RBC plate recorded as colonies counted ..... _____
- b. If no colonies on RBC plate, record as 0 ..... _____
- c. Count obtained from RCC plate recorded as colonies counted ..... _____
- d. If no colonies on RCC plate, record as 0 ..... _____
- e. Values are recorded as number of colonies per container ..... _____

REPORTS

18. Reporting Counts ..... _____
- a. Report computed count as Residual Bacterial Count (RBC)/ specified container capacity in mL ..... _____
  1. Containers rinsed with 20 mL ..... _____
     - a. 5 mL plated for RBC, multiply colonies by 4 ..... _____
     - b. 2 mL plated for RBC, multiply colonies by 10 ..... _____
  2. Containers rinsed with 50 mL ..... _____
     - a. 2 mL plated for RBC, multiply colonies by 25 ..... _____

LABORATORY	LAB #	LOCATION	DATE

PASTEURIZED MILK CONTAINERS

[Unless otherwise stated all tolerances are ±5%]

3. Containers rinsed with 100 mL .....
   a. 2 mL plated for RBC, multiply colonies by 50 .....
b. Report computed coliform count as Residual Coliform Count/container .....
   1. Containers rinsed with 20 mL .....
      a. 10 mL plated for RCC, multiply colonies by 2 .....
   2. Containers rinsed with 50 mL .....
      a. 10 mL plated for RCC, multiply colonies by 5 .....
   3. Containers rinsed with 100 mL .....
      a. 10 mL plated for RCC, multiply colonies by 10 .....
c. If no colonies appear on plates, report as less than n/size of specified container in mL, substituting for n the number that would be reported if 1 colony had been counted from the volume of rinse solution plated and multiply by appropriate factor .....

SWAB METHOD

APPARATUS

19. See Cultural Procedures, items 1-23 .....

20. Screw-Capped Containers .....
   a. 7 to 10 cm long to contain 5 mL solution for non-soluble swabs .....
   b. Containing 4.5 mL solution for alginate swabs .....
   c. Sterile .....

21. Swabs .....
   a. Non-toxic .....
      1. Test each lot by swirling several swabs in 5 mL of sterile dilution buffer, test using *Bacillus stearothermophilus* type assay .....
      2. Maintain records .....
   b. Packaged in convenient protective containers and sterilized .....
   c. Cotton, non-absorbent (firmly twisted to about 5 mm diameter by 2 cm long over one end of wood applicator stick 12-15 cm long) .....
   d. Or, calcium alginate fibers .....
   e. Or, dacron or rayon fibers .....

MATERIALS

22. See items 4 and 5 .....

23. Sodium Hexa-metaphosphate Solution, 10% (if alginate swabs used), sterile .....

24. Shaking Machine, Optional .....

PROCEDURE

25. Identify Plates (See SPC, item 4) .....

26. Collection of Swab Samples .....
   a. Aseptically remove sterile swab from container .....
   b. Open vial of solution, wet swab and press out excess solution .....
   c. Holding swab at 30° angle to surface, rub over 50 sq. cm area (calculate or use sterile template) three times, reversing direction between successive strokes .....
   d. Rinse swab in solution and press out excess .....
   e. Swab four additional 50 sq. cm areas .....
   f. After fifth area has been swabbed, position swab head in vial and break stick, leaving swab head in vial .....

27. Sample Measurement .....
   a. As described in SPC item 6 and 7 except .....
      1. If calcium alginate wool is used, add 0.5 mL of sterile Na Hexa-metaphosphate solution to 4.5 mL rinse solution in vial and shake until dissolved .....
      2. For all other fibers .....
         a. Shake swab container 50 times .....
         b. Each shake a complete back and forth movement of 15 cm .....
         c. Strike palm of hand at end of each cycle .....
         d. Complete shaking in about 10 sec .....
         e. Or, use shaking machine to give equivalent mixing/disintegration, approximately 30 sec .....
   b. Transfer 1 mL for Residual Bacterial Count (RBC) .....
   c. Transfer 3 mL for Residual Coliform Count (RCC) .....

28. Plating (See SPC, item 13) .....

29. Controls (See SPC, item 14) .....

30. Incubation (See SPC, item 15) .....

31. Counting Colonies (See SPC, items 16-18) .....

32. Confirmation Test (See SPC, item 18e) .....

33. Recording Counts .....
   a. Count obtained from RBC plate recorded as colonies counted .....
   b. If no colonies on RBC plate, record as 0 .....
   c. Count obtained from RCC plate recorded as colonies counted .....
   d. If no colonies on RCC plate, record as 0 .....

REPORTS

34. Reporting Counts .....
   a. Report RBC count as n/50 sq cm by dividing count in 33a .....
   b. If no colonies on RBC plate, report as < 1/50 sq cm .....
   c. Report RCC count as recorded in 33c .....
   d. If no colonies on RCC plate, report as < 1/50 sq cm .....