FAMILY COW RAW MILK LAB TEST PROCEDURES

PREP STEPS:

1. Be sure work surface is clean.
2. Verify that incubator temp is 32-34 degree C/ 90 degree F.
3. Put on latex gloves.
4. On the work surface, place: -A raw milk sample bottle/ -A buffered water bottle/ -One each of the CC and APC petri films/- Two pipettes/ -A sample spreader.
5. Remove the seals on the raw milk sample and the buffered water.

COLIFORM TEST:

1. Open 1st pipette (avoid touching the tip).
2. Use the pipette to draw **1ml** of raw milk from the sample bottle.
3. Lift up the plastic of the **CC petri film**, (the ***red*** petri film), and empty the entire 1 ml of raw milk onto the center of the **red** circle.
4. Now place the spreader on top of the plastic film and apply slight pressure to distribute the milk evenly.

APC TEST:

1. Open 2nd pipette. (avoid touching the tip).
2. Use the pipette to draw **1ml** of milk from sample and discharge into the buffered water bottle.
3. Without laying pipette down, gently invert water bottle several times.
4. Draw **1ml** of this water/milk mixture and discharge onto the **APC film**.
5. Now spread this sample the same as you did with the coliform petri film.

FINAL STEPS:

1. Write the “Best By” cap date of the raw milk lot on each petri film.
2. Place both prepared petri films into the incubator.
3. Fill out a reporting chart with: Time, Date, Cap date of sample, & your Initials.

FAMILY COW RAW MILK LAB TEST PROCEDURES

To Read Results:

For CC (ColiformCount) results: after 18-24 hours of incubation at 32-34C

1. Place CC petri film on the "reader light table."
2. Only the dots that are connected to a gas bubble are counted as a coliform colony.
3. Dots alone without gas bubbles do not count.
4. Gas bubbles alone do not count.
5. All dots with gas bubbles do count as coliform colonies.
6. Do not multiply the colonies at all since there was no dilution done on this sample.
7. If you count 3 colonies with bubbles your CC count is simply 3 CC per ml.

NOTE: 0-2 CC/ml is excellent, 3-5 is ok, 5-8 is not so good, 10 coliform colonies per ml is allowed nationwide by FDA in pasteurized milk products on store shelves…properly done raw milk should be much cleaner than 10 CC/ml

For APC (Aerobic Plate Count) results: after 24 hours of incubation at 32-34C

1. Place APC petri film on reader light plate.
2. Count every visible dot as a colony.
3. Multiply the totally colony number by 100 to get your APC/ml of raw milk.
   (by 100 because you diluted the 1 ml sample with 99ml of water so it is a 1/100 dilution.)
4. So for example, if you have 10 visible colonies on the APC film… 10x100=1,000 so your test result is 1,000 APC per ml of raw milk.

NOTE: 1000 APC is excellent, 5,000 is good, 10,000 is ok, 15,000 is not so great, 20,000/ml is the amount of APC bacteria allowed nationwide by FDA in pasteurized milk products on store shelves…properly done raw milk should be much cleaner than 20,000 APC/ml)