Total Organism Test Field Kit for Raw Milk

Description:
Milk provides a wealth of nutritional benefits. But raw milk can harbor dangerous microorganisms that can pose serious health risks to consumers. Current regulations restrict the total bacteria count in milk to a certain level. The conventional way using somatic cell count is not a quantitative method, and the culture method requires extended period of time (>24 hours) to obtain results. Therefore, a rapid test to quantify total organism in raw milk is essential for the milk producers and processors to segregate different grade of milks quickly, especially in the field without laboratory setup. Our rapid detection system utilizes a fluorogenic substrate which, when hydrolyzed by specific enzymes of bacteria (during peptide hydrolysis), produces a fluorescence signal which is conveniently read by our handheld fluorometer.

Assay Performance:
- Fast (< 30 minutes), convenient, and sensitive.
- Highly portable field kit using handheld Fluorometer for measurement.
- Sensitivity: 10,000 cfu/sampling.

Content of the Field Kit:
- Carrying case
- Handheld Fluorometer
- Total Organism Detection Kit for Milk, 50 tests

Detection Kit Contents:
- Reagent A (Substrate)
- Reagent C (Lysing agent)
- Plastic Vials (testing): 50 pcs
(Store the reagents in 2-8°C. Shelf-life 12 months from shipment.)

Material may be required but not provided:
- 5-setting pipette
- 200uL disposable pipette tip

Assay Procedure:
1. Draw Pipette 0.3mL of milk sample and transfer it into the Plastic Vial. The sample should reach the 0.3mL line on the Plastic Vial.
2. Add 3 drops of Reagent C into the Plastic Vial. Secure the cap of Plastic Vial, and shake the Plastic Vial gently to mix the reagent with the milk sample.
3. Wait 5 minutes.
4. While waiting for the above 5 minutes, prepare the fluorometer by turning on the unit. From the main screen, press [Measure] -> [Assay 1]. The fluorometer is now ready for measuring.
5. Open the cap of the Plastic Vial, and add 2 drops of Reagent A (substrate). Secure the cap, and shake the Plastic Vial gently to mix the reagent with the milk sample.
6. Wait 2 minutes.
7. Place the Plastic Vial into the Fluorometer test chamber and secure the cover cap of the test chamber. (Wipe the outside of the Plastic Vial with a lint free cloth, and make sure there are no bubbles in the vial.)
8. Press the [Blank] button. After the measurement is finished, press the [Measure] button immediately, and the measurement result should be close to zero (0).
9. Wait 20 minutes. The Fluorometer will automatically measure the sample again and show the result of the test of Total Organism Count in CFU.

Note: (1): If the reading shows “Over Limit”, the bacteria count is too high. Dilute the sample and repeat the assay.
(2): The meter has been calibrated in the factory for the best detection accuracy. But from time to time it is necessary to calibrate the meter again in order to match the particular customer sample quality and measurement conditions. Please contact hVI for the user calibration procedures.