

What do those numbers mean at the creamery?

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Listed below are five lab indicators of milk quality and what these measurements may reflect.

- **Standard Plate Count (SPC):** Estimates the total number of viable aerobic (oxygen-loving) bacteria present in raw milk. A high SPC can indicate inadequate equipment cleaning, sanitation before milking, cooling, udder hygiene, and milking routine hygiene.
 - Goal = less than 5,000 cfu/mL.
- **Bulk Tank Somatic Cell Count (BTSCC):** A measure of somatic cells present in milk. BTSCC gauges the udder infection statistics of the herd and elevated BTSCC can indicate loss of production due to mastitis. Although the legal limit in the United States is 750,000 cells/mL, that high of level indicates very poor milk quality.
 - Goal = less than 200,000 cells/mL. Many top herds achieve ~100,000 or less.
- **Laboratory Pasteurization Count (LPC):** Estimates the number of bacteria that can survive laboratory pasteurization for 30 minutes. High LPC numbers indicate persistent cleaning problems of equipment or milk tank, worn-out milking equipment, especially rubber goods, and biofilms.
 - Goal = less than 100 cfu/mL.
- **Coliform Count (CC):** Estimates the number of bacteria that originate from manure or a fecal matter contaminated environment. This can indicate manure in milk, often secondary to milking wet, dirty udders or manure contamination of milking unit. Other contributors to a high coliform count can include cow cleanliness, towel sanitation, and contaminated water.
 - Goal = less than 50 cfu/mL.
- **Preliminary Incubation Count (PIC):** A measure of the number of cold-loving bacteria in milk. Elevated numbers may indicate inadequate cleaning of equipment, udder hygiene, udder preparation, cooling, contaminated water, or improper drainage. If PIC is high compared to SPC, it suggests that bacteria is allowed to enter and grow at some point between the milking unit and the bulk tank.
 - Goal = less than 3-4 times the SPC or less than 50,000 cfu/mL.

Consult your creamery for these measurements and their preferred levels. The following website was used as a reference:

<https://dairyfoods.wisc.edu/assets/PDFDFR2011/Engel1.pdf>