

Louisiana Office of Public Health Laboratories

Test Name	Somatic Cell Count
PHL Location	Amite Regional Laboratory
CPT Code	N/A
Synonyms	Electronic Somatic Cell Count (ESCC), Direct Microscopic Somatic Cell Count (DMSCC)
Brief Description of Test	Used for enumeration of somatic cells in raw milk
Possible Results	Number of somatic cells per ml
Reference Range	Raw cow milk: <100,000 est to 750,000/ml Raw goat milk: <100,000 est to 1,500,000/ml
Specimen Type	Raw dairy milk and raw goat milk
Specimen Container(s):	Raw milk samples are collected in vials and submitted in sterile Whirl-Pak bags or sterile plastic vials normally used by industry.
Minimum volume accepted:	Raw milk: at least 40 ml
Collection Instructions	Collect a representative sample according to established protocol. In using the sterile Whirl-Pak or sterile vial there must be at least 0.5 to 1.0 inch air space. If using the Whirl-Pak bag secure closure so that the tabs are not twisted together.
Storage and Transport Instructions	Samples must be stored on wet ice, the ice cannot cover the sample top and there must not be any water over the top of the sample at anytime. The sample must be transported in a timely manner so that testing can be performed prior to 72 hours of collection. Samples must be accompanied with a pilot sample of the same type and size for raw samples and at least ½ the size of the largest container for finished fluid products. The temperature pilot must be from 0.0-4.5C upon receipt.
Causes for Rejection	<ol style="list-style-type: none"> 1. Temperature of pilot samples out of acceptable range. 2. Time of receipt >72 hours for ESCC and DMSCC. 3. Sample container unprotected or under ice or water when received. 4. Sample frozen 5. Temperature control missing 6. Sample leakage

	<p>7. Unsatisfactory sample container</p> <p>8. Insufficient sample quantity</p>
Limitations of the Procedure	<p>A goat milk ran by Electronic Cell Counter with a result of >1,500,000 cells/ml must be confirmed by DMSCC.</p> <p>The level of experience and training directly influences final counts for DMSCC.</p>
Interfering Substances	<p>Electronic Cell Counter: The age and concentration of dye. The age, stress level, and length of lactation period for individual cows or goats. The seasons of the year.</p> <p>DMSCC: all of the above plus ghost or dead cells do not easily stain. High concentration of bacteria in the milk, clumping of somatic cells, and trash particles directly limit counting ability.</p>
References	<p>Standard Methods for the Examination of Dairy Products</p> <p>FDA 2400 Series for the Examination of Dairy Products</p> <p>US FDA/CFSAN Grade A Pasteurized Milk Ordinance</p> <p>Laboratory Milk and Dairy Products SOP Manual</p>
Additional Information	<p>A STARLIMS MDP Collection Manifest or a LAB50 must accompany the submission of samples. All samples and sample information should be pre-logged into the STARLIMS system, including Client Name, product type, container size, name of collector, collection date/time, and temperature of product at collection. A pilot temperature sample must be submitted for each ice chest if multiple ice chests are used.</p>
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