

Component & Quality Testing Information

Producers in BC are provided with milk sample test results from every viable sample. We strive to provide producers with the information as quickly as possible and can be found in your individual producer login in MMS.

Components

The BCMMB will test every viable sample for “components,” this includes:

- *Butterfat* (BF)
- *Protein* (PR)
- *Lactose and other solids* (LOS). Lactose is measured from your milk sample and other solids are a factor that is added to the lactose result

Producer’s monthly test results are based on all tested pickups for the month. Producer test results will be available in the producers individual MMS account under “test results” as well as by email.

Quality

The BCMMB will test every viable sample for “quality”, except for IBC where we will only use fresh samples, this includes:

- *Somatic Cell Count* (SCC) – we test every viable sample for SCC.
- *Individual Bacteria Count* (IBC) – we strive to test TWO (2) samples per week. Bacteria can only be tested on fresh samples hence the lesser frequency. If you see blank field (no result) this means that the particular sample was not tested for IBC.
- *Freezing Point Depression* (FPD) formerly referred to as Cryoscope (Cryo, Cry, or water) – Is a measure of added water in your milk, we test every viable sample for FPD.

Quality results (SCC and IBC) will be calculated on a weighted average at the end of the month. IBC will only be tested on fresh samples (which will be tested twice per week); the two tests will be performed randomly on fresh samples. An example calculation on weighted average is found below.

FPD, or water, results are treated a bit differently. If in a month a producer has two results above 3.7%, then their month end result is the average of those results above 3.7%. If a producer has only one or no results above 3.7% then their month end average is the straight average of all their cryoscope results for that month.

Milk Urea Nitrogen (MUN)

We test every viable sample for MUN. MUN does not factor into producer’s component or quality results and has no impact to a producer pay. MUN is provided to producers for information only to help

maximize on-farm feeding efficiencies. Producers are encouraged to discuss with their feed representatives or nutritionists to further understand how MUN impacts your farm. MUN will fluctuate day to day, depending on many factors such as time since feeding and feed intake, and it is important to look at trends and averages rather than day to day MUN results.

Free-Fatty-Acid (FFA)

We test every viable sample for FFA. FFA does not factor into producer's component or quality results and has no impact to a producer pay. The BCMMB began testing for FFA when challenges arose around milk foaming and other quality factors at the processing level. At this time there is no concrete correlation between an FFA level and quality issues. We have noted that spikes in FFA may be correlated to quality issues or lack of milk foamability. The BCMMB continues to analyse data around FFA and will share with producers if any helpful information arises.

Inhibitor Infractions

It is the responsibility of every producer to ensure that milk made available for pick-up meets the provincial guidelines. A producer whose milk has been found to contain veterinary drug residues or inhibitory substance residues is not permitted to sell or supply milk until a subsequent bulk milk sample taken from the farm bulk milk tank tests negative. Following a positive test result:

- Shipments are immediately suspended for the offending producer.
- A producer is required to test their milk and provide a negative result to the BCMMB before shipping can resume.
- It is the producer's responsibility to inform the BCMMB to resume pick up.

Please see the BCMMB [Non-Qualifying Milk Policy](#) for further information.

The Below Tables summarize the thresholds for the all lab results:

*If there is no test result available, infill rules will apply. Infill rules are described below.

Component	Frequency of testing	Quality Bonus Threshold	Ministry Penalty Threshold	Comments	Payment Calculation
Butterfat (BF)	Every Sample	N/A	N/A		*Based on actual Volume multiplied by test result = value in kh/hL
Protein (PR)	Every Sample	N/A	N/A		*Based on actual Volume multiplied by test result = value in kh/hL
Lactose & Other Solids (LOS)	Every Sample	N/A	N/A	'Other solids' is a factor added to lactose	*Based on actual Volume multiplied by test result = value in kh/hL

Quality	Frequency of Testing	Quality Bonus Threshold	Ministry Penalty Threshold	Comments	Payment Calculation
Somatic Cell Count (SCC)	Every Sample	≤ 250,000	≤ 400,000	Results are truncated @ 999,000	Based on weighted average using only the volumes from the dates that SCC is reported
Individual Bacteria Count (IBC)	2 tests per week (random)	≤ 30,000	≤ 121,000	Results are truncated @ 999,000	Based on weighted average using only the volumes from the dates that IBC is reported. See example
Freezing Point Depression (FPD) or Cryoscope (CRY)	Every Sample	≤ 3.7%	≤ 3.7%	This test detects “added water”	If ≤ 1 cryo test result is greater than 3.7% in a month, all cryo results for that month are averaged. If ≥ 2 cryo test results are greater than 3.7% in a month, only cryo results ≥3.7% are averaged.
Inhibitor	Once per month (random)	Not Permitted	Not Permitted	See Non-Qualifying Milk Policy document available on our website	If a sample is found positive for any inhibitory substance either at a processor or during random testing, an infraction will be levied. See BCMMB’s Non-Qualifying Milk Policy document
Milk Urea Nitrogen (MUN)	Every Sample	N/A	N/A	A high MUN value is 14-16 mg/dL and is indicative of excess urea which is likely an imbalance in rumen availability of protein/carbohydrate. High urea can cost a producer money.	N/A
Free Fatty Acid (FFA)	Every Sample	N/A	N/A	High value spikes could be concerning	N/A

Example of a weighted average calculation for IBC

Date	Volume Shipped	IBC	Volume x IBC
01-May	3,200	0	No test
03-May	3,279	8,000	26,232,000
05-May	3,130	10,000	31,300,000
07-May	3,150	0	No test

Volume (A)	Volume X IBC (B)	Weighted Average = (B divided by A)
6,409	57,532,000	8,977

Producer Concerns

If you receive a lab result that you believe is not representative of your milk, you must contact the Quality & Transportation department at the BCMMB as quickly as possible. We have the ability to review component and quality results to ensure test results are representative of your milk. We will not, however, change component or quality results due to a producer request unless we can determine that the results are not representative of your milk.

MMS Questions: Pick-up History vs. Test Results Dashboard

We have heard some concerns about the differences in test results that appear between the PICKUP HISTORY and the TEST RESULTS DASHBOARD screens in MMS. The differences are due to timing of information being received and displayed. When a pick-up is made at a producer's farm, the volume is uploaded to the MMS system almost immediately; however, test results are not received from the lab until the next day or later. On the PICKUP HISTORY screen, the component results will "INFILL" as soon as there is a volume in the system.

INFILL is a way the system estimates or assumes milk components based on:

- 1) producer weighted average for the month,
- 2) producer weighted average for the previous month or
- 3) Provincial weighted average (in that order of availability).

When the official lab test results are uploaded to the system, they will appear in the TEST RESULTS DASHBOARD screen and after a maximum of one day delay, will overwrite the INFILL test results that appear in the PICKUP HISTORY screen. If official lab test results are not received for any reason, then no results will display in the TEST RESULTS DASHBOARD screen and the INFILL results will be used for final pay purposes. Therefore, this delay explains why there may be a period of time whereby the PICKUP HISTORY and TEST RESULTS DASHBOARD screens show differing results for the same pickup. When these differences appear, the components displayed in the TEST RESULTS DASHBOARD screen are the actual/final results and will be used as the basis for producer weighted average and final pay calculations and will copy over to the PICKUP HISTORY screen in time.

If you have any questions or concerns, please contact Kelly Harris at 604-854-4479 or kharris@bcmilk.com, or you can contact Woody Siemens at 604-854-4476 or wsiemens@bcmilk.com