

# Certified Reference Values



Milk Testing

Production date: 9/22/2025

Batch: 39 - 2025

|                                                                                     | Unhomogenised<br>past. milk | Unhomogenised<br>past. cream |        |        |        |        |        |        |        |        |        |        |
|-------------------------------------------------------------------------------------|-----------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Type                                                                                | Buttermilk                  | 6.5%                         | 8%     | 9.5%   | 11%    | 12%    | 14%    | 18%    | 32%    | 38%    | 46%    | 50%    |
| <b>Fat (g/100 g)</b><br>≤8%+9.5%: ISO 1211/IDF 1:2010<br>≥9%: ISO 2450/IDF 16: 2008 | **0.729                     | 6.732                        | 8.110  | 9.225  | 11.181 | 11.773 | 13.780 | 17.769 | 31.882 | 38.600 | 44.609 | 48.810 |
| <b>Protein (g/100 g)</b><br>ISO 8968-1/IDF 20-1:2014                                | 3.424                       | 3.700                        | 3.650  | 3.605  | 3.523  | 3.464  | 3.387  | 3.240  | 2.646  | 2.364  | 1.981  | 1.858  |
| <b>Lactose, Mono (g/100 g)</b><br>ISO 5765-2/IDF 79:2002                            |                             |                              |        |        |        |        |        |        |        | 3.063  |        |        |
| <b>Dry Matter (g/100 g)</b><br>ISO 6731/IDF 21:2010                                 |                             |                              | 17.023 | 18.053 |        | 20.182 | 22.053 | 25.702 | 38.509 | 44.552 | 49.678 | 53.746 |

\*\* Increase uncertainty (U×2)

Version 1

Date: 9/26/2025

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Information, if any:

## Informations according to the certified reference material:

### Description

Bovine milk from Danish Dairies.  
CRM has preservative added.

The certified values are calculated based on results from chemical analysis.

Because of the short validity period, reference analyses  
is carried out at one laboratory only, but in several determinations  
and batches for statistical robustness.

Homogeneity is controlled on data from both chemical and FTIR analysis.  
Stability has been calculated for a representative batch.

\*Following changes to the above methods have been made.

Fat: The drying is with a constant time instead of constant weight.

Protein: The destruction does not take place at lower temperatures, but starts at 420°C.

Dry matter: Single-use vials without lids are used instead of vials with lid, and the samples are not pre-dried before placed in the oven.

### Instruction for handling and use:

Place the CRM at room temperature for 60 min, then heat in water bath to 38°C for 20 min.  
Gently invert the CRM 20 times and measure immediately on FTIR equipment  
Samples can't be reused. Once heated, please discard any remains after measurements have finished.

### Sample size:

Approx. 50 mL.

### Period of validity:

14 days at 4°C ± 2°C from production date.

### Storage information:

Store at 4°C ± 2°C until use.

The Samples are calculated with following expanded uncertainty U%

|            | U%   |
|------------|------|
| Fat        | 1.5% |
| Protein    | 1.5% |
| Lactose    | 2.0% |
| Dry Matter | 1.0% |