

**MANUFACTURING MILK LAW OF 2001 (EXCERPT)**  
**Act 267 of 2001**

**288.630 Prohibited acts; standards; compliance.**

Sec. 70.

(1) A person shall not directly, through an agent, or on behalf of another person sell or offer for sale, furnish, or possess or control with intent to sell or offer for sale, or furnish an unsanitary, adulterated, or misbranded milk or dairy product to a person or a processor.

(2) Dairy products made or sold in Michigan shall comply with the requirements of this act and the standards as follows:

Chemical, Physical, Bacteriological, and  
Temperature Standards

|                                                                                                                                                            |                     |                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MANUFACTURING GRADE RAW<br>MILK FOR PASTEURIZATION (NOT<br>FOR FROZEN DESSERTS)<br>INCLUDING ULTRAFILTRATION<br>OR REVERSE OSMOSIS RAW MILK<br>CONCENTRATE | Temperature         | Bulk milk cooled to 45°F (7°C) or less within 2 hours after milking and maintained thereat. Provided that the blend temperature after the first and subsequent milkings does not exceed 50°F (10°C). Can milk not to exceed 60°F (16°C) if used for cheese making; if delivered to the plant within 2 hours of milking, no temperature limit. |
|                                                                                                                                                            | Bacterial limits    | Not to exceed 500,000 per ml (milk for cheese not to exceed 750,000 per ml). Not to exceed 1,000,000 per ml as commingled milk prior to pasteurization.                                                                                                                                                                                       |
|                                                                                                                                                            | Somatic cell count  | Not to exceed 1,000,000 per ml.                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                            | Drug residues       | No positive results on drug residue detection methods which have been found to be acceptable for use with raw milk.                                                                                                                                                                                                                           |
|                                                                                                                                                            | Sediment            | Not to exceed a USDA no. 3 standard following procedures from standard methods for the examination of milk and milk products.                                                                                                                                                                                                                 |
|                                                                                                                                                            | Freezing point      | -0.530°F maximum.                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                            |                     |                                                                                                                                                                                                                                                                                                                                               |
| RAW MILK FOR FROZEN<br>DESSERTS                                                                                                                            | Temperature         | Bulk milk cooled to 45°F (7°C) or less within 2 hours after milking and maintained thereat. Provided, that the blend temperature after the first and subsequent milkings does not exceed 50°F (10°C).                                                                                                                                         |
|                                                                                                                                                            | Bacterial limits    | Not to exceed 100,000 per ml for individual supplies, not to exceed 300,000 per ml commingled.                                                                                                                                                                                                                                                |
|                                                                                                                                                            | Somatic cell counts | Not to exceed 750,000 per ml.                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                            | Drug residues       | No positive results on drug residue detection methods which have been found to be acceptable for use with raw milk.                                                                                                                                                                                                                           |
|                                                                                                                                                            | Sediment            | Not to exceed a USDA no. 3 standard following procedures from standard methods for the examination of milk and milk products.                                                                                                                                                                                                                 |
|                                                                                                                                                            | Freezing point      | -0.530°F maximum.                                                                                                                                                                                                                                                                                                                             |
| PASTEURIZED CONDENSED MILK<br>AND CONDENSED SKIM MILK                                                                                                      | Temperature         | Cooled to 45°F (7°C) [50°F (10°C) if 45% or more solids] or less, or heated to 145°F (63°C) or greater and maintained thereat unless the product is being dried within 4 hours after condensing.                                                                                                                                              |
|                                                                                                                                                            | Bacterial limits    | Not to exceed 30,000 per gram.                                                                                                                                                                                                                                                                                                                |

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| DRY WHOLE MILK, EXTRA GRADE    | Coliform count            | Not to exceed 10 per gram. Provided, that in the case of bulk milk transport tank shipments shall not exceed 100 per ml.                          |
|                                | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with condensed milk and condensed skim milk. |
|                                | No more than:             |                                                                                                                                                   |
|                                | Butterfat                 | Not less than 26% or more than 40%.                                                                                                               |
|                                | Moisture                  | 4.50%.                                                                                                                                            |
|                                | Solubility index          | 1.0 ml spray process; 15.0 roller process.                                                                                                        |
|                                | Bacterial limit           | Not to exceed 50,000 per gram.                                                                                                                    |
|                                | Coliform count            | Not to exceed 10 per gram.                                                                                                                        |
|                                | Scorched particles disc B | 15.0/ gram spray process; 22.5 roller process.                                                                                                    |
|                                | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with dry whole milk.                         |
| DRY WHOLE MILK, STANDARD GRADE | DMCC count                | Less than 100,000,000 per gram.                                                                                                                   |
|                                | No more than:             |                                                                                                                                                   |
|                                | Butterfat                 | Not less than 26% or more than 40%.                                                                                                               |
|                                | Moisture                  | 5.00%.                                                                                                                                            |
|                                | Titratable acidity        | 0.15%.                                                                                                                                            |
|                                | Solubility index          | 1.5 ml spray process; 15.0 ml roller process.                                                                                                     |
|                                | Bacterial limit           | Not to exceed 100,000 per gram.                                                                                                                   |
|                                | Coliform count            | Not to exceed 10 per gram.                                                                                                                        |
|                                | Scorched particles disc B | 22.5 per gram spray process; 32.5 per gram roller process.                                                                                        |
|                                | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with dry, whole milk.                        |
| NONFAT DRY MILK, EXTRA GRADE   | DMCC count                | Less than 100,000,000 per gram.                                                                                                                   |
|                                | No more than:             |                                                                                                                                                   |
|                                | Butterfat                 | 1.25%                                                                                                                                             |
|                                | Moisture                  | 4.00%                                                                                                                                             |
|                                | Titratable acidity        | 0.15%                                                                                                                                             |
|                                | Solubility index          | 1.2 ml (2.0 ml high-heat, max) spray process; 15.0 ml roller process.                                                                             |
|                                | Bacterial limit           | Not to exceed 10,000 per gram spray or 50,000 per gram roller process.                                                                            |

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| NONFAT DRY MILK, STANDARD GRADE      | Coliform count            | Not to exceed 10 per gram.                                                                                                                                                  |
|                                      | Scorched particles disc B | 15.0/ gram spray; 22.5/ gram roller process.                                                                                                                                |
|                                      | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with nonfat dry milk.                                                  |
|                                      | DMCC count                | Less than 100,000,000 per gram.                                                                                                                                             |
|                                      | No more than:             |                                                                                                                                                                             |
|                                      | Butterfat                 | 1.50%                                                                                                                                                                       |
|                                      | Moisture                  | 5.00%                                                                                                                                                                       |
|                                      | Titratable acidity        | 0.17%                                                                                                                                                                       |
|                                      | Solubility index          | 2.5 ml spray process; 15.0 ml roller process.                                                                                                                               |
|                                      | Bacterial estimate        | 75,000/ gram spray; 100,000/ gram roller process.                                                                                                                           |
|                                      | Coliform count            | 10 per gram.                                                                                                                                                                |
|                                      | Scorched particles disc B | 22.5/ gram spray; 32.5/ gram roller process.                                                                                                                                |
|                                      | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with nonfat dry milk.                                                  |
|                                      | DMCC count                | Less than 100,000,000 per gram.                                                                                                                                             |
| INSTANT NONFAT DRY MILK, EXTRA GRADE | No more than:             |                                                                                                                                                                             |
|                                      | Butterfat                 | 1.25%.                                                                                                                                                                      |
|                                      | Moisture                  | 4.50%.                                                                                                                                                                      |
|                                      | Titratable acidity        | 0.15%.                                                                                                                                                                      |
|                                      | Solubility index          | 1.0 ml.                                                                                                                                                                     |
|                                      | Bacterial limit           | Not to exceed 10,000 per gram.                                                                                                                                              |
|                                      | Coliform count            | Not to exceed 10 per gram.                                                                                                                                                  |
|                                      | Scorched particles disc B | 15.0/ gram.                                                                                                                                                                 |
|                                      | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with nonfat dry milk.                                                  |
|                                      | Dispersibility            | 85.0%                                                                                                                                                                       |
|                                      | DMCC count                | Less than 40,000,000 per gram.                                                                                                                                              |
|                                      | Temperature               | Maintained at a temperature of 45°F (7°C) or less, or 135°F (57°C) or greater, except for acid-type whey with a titratable acidity 0.40% or above, or a pH of 4.6 or below. |
|                                      |                           |                                                                                                                                                                             |
|                                      |                           |                                                                                                                                                                             |
| WHEY FOR CONDENSING                  |                           |                                                                                                                                                                             |

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| PASTEURIZED CONDENSED<br>WHEY AND WHEY PRODUCTS                  | Drug<br>residues                | No positive results on drug residue detection methods<br>which have been found to be acceptable for use with whey.                                          |
|                                                                  | Temperature                     | Cooled to 50°F (10°C) or less during crystallization,<br>within 72 hours of condensing.                                                                     |
|                                                                  | Coliform<br>count               | Not to exceed 10 per gram.                                                                                                                                  |
| DRY WHEY, EXTRA GRADE                                            | Drug<br>residues                | No positive results on drug residue detection methods<br>which have been found to be acceptable for use with<br>condensed whey.                             |
|                                                                  | Bacterial<br>limit              | Not to exceed 30,000 per gram.                                                                                                                              |
|                                                                  | Coliform<br>count               | Not to exceed 10 per gram.                                                                                                                                  |
|                                                                  | Milkfat<br>content              | Not to exceed 1.5%.                                                                                                                                         |
|                                                                  | Moisture<br>content             | Not to exceed 5.0%.                                                                                                                                         |
|                                                                  | Scorched<br>particle<br>content | Not to exceed 15.0%.                                                                                                                                        |
| DRY WHEY, DRY WHEY<br>PRODUCTS                                   | Bacterial<br>limit              | Not to exceed 50,000 per gram.                                                                                                                              |
|                                                                  | Coliform<br>count               | Not to exceed 10 per gram.                                                                                                                                  |
|                                                                  | Butterfat                       | Not more than 1.50%.                                                                                                                                        |
|                                                                  | Moisture                        | Not more than 5%.                                                                                                                                           |
|                                                                  | Drug<br>residues                | No positive results on drug residue detection methods<br>which have been found to be acceptable for use with dry<br>whey and dry whey products.             |
| DRY BUTTERMILK AND DRY<br>BUTTERMILK PRODUCTS, EXTRA<br>GRADE    | Butterfat                       | 4.5% min.                                                                                                                                                   |
|                                                                  | Moisture                        | 4.0% max.                                                                                                                                                   |
|                                                                  | Titrateable<br>acidity          | 0.10 - 0.18%.                                                                                                                                               |
|                                                                  | Solubility<br>index             | 1.25 ml spray process; 15.0 roller process.                                                                                                                 |
|                                                                  | Bacterial<br>limit              | Not to exceed 20,000 per gram.                                                                                                                              |
|                                                                  | Coliform<br>count               | Not to exceed 10 per gram.                                                                                                                                  |
|                                                                  | Scorched<br>particles disc<br>B | 15.0 mg spray process; 22.5 mg roller process.                                                                                                              |
|                                                                  | Drug<br>residues                | No positive results on drug residue detection methods<br>which have been found to be acceptable for use with dry<br>buttermilk and dry buttermilk products. |
|                                                                  | Butterfat                       | 4.5% min.                                                                                                                                                   |
|                                                                  | Moisture                        | 5.0% max.                                                                                                                                                   |
| DRY BUTTERMILK AND DRY<br>BUTTERMILK PRODUCTS,<br>STANDARD GRADE | Titrateable<br>acidity          | 0.10 - 0.20%.                                                                                                                                               |
|                                                                  | Solubility<br>Index             | 2.0 ml spray process; 15.0 roller process.                                                                                                                  |

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| BUTTER, WHIPPED BUTTER                                            | Bacterial limit           | Not to exceed 75,000 per gram.                                                                                                                          |
|                                                                   | Coliform count            | Not to exceed 10 per gram.                                                                                                                              |
|                                                                   | Scorched particles disc B | 22.5 mg spray process; 32.5 mg roller process.                                                                                                          |
|                                                                   | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with dry buttermilk and dry buttermilk products.   |
|                                                                   | Percent butterfat         | Not less than 80%.                                                                                                                                      |
|                                                                   | Temperature               | Maintained at a temperature of 45°F (7°C) or less, when in storage.                                                                                     |
|                                                                   | Proteolytic count         | Not more than 50 per gram.                                                                                                                              |
|                                                                   | Yeast and mold            | Not more than 10 per gram.                                                                                                                              |
|                                                                   | Coliform count            | Not more than 10 per gram.                                                                                                                              |
|                                                                   | Keeping quality           | Satisfactory after 7 days at 70°F (21°C).                                                                                                               |
| PASTEURIZED MILK, CREAM, FLUID DAIRY PRODUCTS FOR FROZEN DESSERTS | Bacterial limit           | Not to exceed 20,000 per ml.                                                                                                                            |
|                                                                   | Coliform count            | Not to exceed 10 per gram. Provided, that in the case of bulk milk transport tank shipments shall not exceed 100 per ml.                                |
|                                                                   | Storage temp              | No higher than 45°F (7°C).                                                                                                                              |
| FROZEN DESSERT MIX                                                | Bacterial limit           | 30,000 per ml.                                                                                                                                          |
|                                                                   | Coliform count            | Not to exceed 10 per gram. Provided, that in the case of bulk milk transport tank shipments shall not exceed 100 per ml.                                |
|                                                                   | Storage temp              | No higher than 45°F (7°C). (Sterile or aseptic mix has no storage temperature requirement.)                                                             |
| FROZEN DESSERTS                                                   | Bacterial limit           | 30,000 per ml.                                                                                                                                          |
|                                                                   | Coliform count            | Not to exceed 10 per ml (20 per gram for chocolate, fruit, nuts or other bulky flavored frozen desserts).                                               |
|                                                                   | Storage temp              | No higher than 32°F (0°C).                                                                                                                              |
| STERILIZED OR ASEPTIC PRODUCTS                                    | Butterfat                 | Per standards listed in 21 C.F.R. 135.                                                                                                                  |
|                                                                   | Bacterial limit           | Refer to 21 CFR 113.3(e)(1).                                                                                                                            |
|                                                                   | Temperature               | None.                                                                                                                                                   |
|                                                                   | Yeast and mold            | No viable yeast or mold spores.                                                                                                                         |
|                                                                   | Drug residues             | No positive results on drug residue detection methods which have been found to be acceptable for use with aseptically processed milk and milk products. |

PRIVATE WATER SUPPLIES FOR  
DAIRY FARMS AND DAIRY  
PLANTS; RECIRCULATED  
COOLING WATER (SWEET  
WATER); GLYCOL FOR COOLING

|                   |                                                                                 |
|-------------------|---------------------------------------------------------------------------------|
| Coliform<br>count | Less than 1.1 per 100 ml as MPN or equivalent method<br>less than 1 per 100 ml. |
|-------------------|---------------------------------------------------------------------------------|

CONDENSATE RECOVERY WATER  
(COW WATER)

|                      |                           |
|----------------------|---------------------------|
| Total plate<br>count | Not to exceed 500 per ml. |
|----------------------|---------------------------|

|                              |                            |
|------------------------------|----------------------------|
| Chemical<br>oxygen<br>demand | Not to exceed 12 mg per L. |
|------------------------------|----------------------------|

|           |                        |
|-----------|------------------------|
| Turbidity | Not to exceed 5 units. |
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**History:** 2001, Act 267, Eff. Feb. 8, 2002 ;-- Am. 2008, Act 147, Eff. June 27, 2008

**Compiler's Notes:** In the section of the table entitled "PASTEURIZED CONDENSED MILK AND CONDENSED SKIM MILK", the first instance of "145Å°" evidently should read "145Å°F".