

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 MILK FOR PASTEURIZATION (NOT FOR FROZEN DESSERTS) INCLUDING ULTRAFILTRATION OR REVERSE OSMOSIS RAW MILK 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°H maximum.
RAW MILK FOR FROZEN 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°H maximum.
PASTEURIZED CONDENSED MILK 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° (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.

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.

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.
INSTANT NONFAT DRY MILK, EXTRA GRADE	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	1.25%.
	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%
WHEY FOR CONDENSING	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.

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

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.
FROZEN DESSERTS	Storage temp	No higher than 45°F (7°C). (Sterile or aseptic mix has no storage temperature requirement.)
	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).
STERILIZED OR ASEPTIC PRODUCTS	Storage temp	No higher than 32°F (0°C).
	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

CONDENSATE RECOVERY WATER
(COW WATER)

Coliform count	Less than 1.1 per 100 ml as MPN or equivalent method less than 1 per 100 ml.
Total plate count	Not to exceed 500 per ml.
Chemical oxygen demand	Not to exceed 12 mg per L.
Turbidity	Not to exceed 5 units.

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 "145°" evidently should read "145°F".