Reduced Lactose Whey Standard

Product Definition

Reduced Lactose Whey (RLW) is a product obtained by the selective removal of lactose from whey. The lactose content of the dry product may not exceed 60%. Removal of lactose is accomplished by physical separation techniques such as precipitation, filtration, or dialysis. Reduced Lactose Whey complies with all provisions of the U.S. Federal Food, Drug, and Cosmetic Act.

Composition

Parameter	Units of Measure	Typical Values	Limits
Protein	%	18.0 – 24.0	26.0 maximum
Lactose	%	52.0 – 58.0	60.0 maximum
Fat	%	1.0 – 4.0	5.0 maximum
Total moisture	%	3.0 – 4.0	5.0 maximum
Ash	%	11.0 – 22.0	24.0 maximum

Other Characteristics

Physico-chemical Properties		
Parameter	**Units of Measure**	**Limits**
Scorched particles	mg/25g	15.0 maximum
Color	visual	white to cream
Flavor	sensory	bland, clean

Microbiological Analysis		
Parameter	**Units of Measure**	**Limits**
Standard plate count	CFU/g	30,000 maximum
Yeast and mold	CFU/g	100 maximum
Coliforms[1]	CFU/g	10 maximum
Enterobacteriaceae[1]	CFU/g	10 maximum
Salmonella	CFU/sample[2]	not detected
Staphylococcus (coagulase positive)	CFU/g	not detected[3]
Listeria genus	CFU/g	not detected

1 - The food industry is trending toward *Enterobacteriaceae* ("EB") as the most commonly used category of indicator organisms for gauging general process sanitation. For compliance to this Standard, either coliforms and/or EB shall be utilized, at the discretion of the manufacturer.

2 - Typical minimum sample size for *Salmonella* testing is 25 g, but the exact sample size and methodology is left to the discretion of the manufacturer.

3 - Where the effective limit of quantitation for the test is 10 CFU/g (such as when a dilution factor of 10 is applied) then the test result must be not detected in order to comply with this Standard. Where the testing method is capable of quantifying microbial counts below 10 CFU/g, then a compliant result must be a value less than 10 CFU/g.

Permissible Additives

Reduced Lactose Whey may be pH adjusted with an appropriate mineral or organic acid or base. Any pH adjustment agent used for this purpose shall be food grade and shall be used in accordance with U.S. current Good Manufacturing Practices and in accordance with its GRAS status, where applicable.

Methods of Analysis

Parameter	Reference Method
Protein	AOAC 991.20 (N x 6.38)
Fat	AOAC 989.05
Lactose	ISO 22662 / IDF 198
Moisture	AOAC 925.45
Ash	AOAC 942.05
Scorched particles	ADPI
Microbiological tests	FDA BAM

Product Labeling

Recommended identification: Reduced Lactose Whey (___% lactose)

where the % lactose is declared in 5% increments; or declared as the actual percentage, where the supporting analysis for the lactose content must also be supplied.

Typical Applications

Reduced Lactose Whey is typically used in infant foods, confections, prepared dry mixes, bakery products, soups, sauces, gravies, dry seasoning blends, salad dressings, frozen foods, meat products, process cheese, and others.

Typical Storage & Shipping

Product should be stored, shipped, and utilized according to the manufacturer's established recommendations. As guidance, product should be stored and shipped in a cool, dry environment with temperature below 80°F and relative humidity below 65%. Stocks should be rotated and utilized in accordance with the manufacturer's established date of expiration or retest.

Typical Packaging

Multiwall kraft bags with polyolefin inner liner, or other suitable closed containers (e.g., totes) are typical.

Revision History

Version	Effective Date	Notes
1.0*	12/02/2015	First officially approved version of this new ingredient standard.
2.0	07/03/2023	Migrated this Standard to the new modernized format as authorized by the ADPI Standards Committee. No previously established test parameters or limits were materially altered by this update. Authorization to use additives for pH adjustment was migrated out of the Product Definition section and into the Permissible Additives section that is provided in the modernized format, following the verbiage previously reviewed by the ADPI Standards Committee. This revision required a footnote to clarify the units of measure for *Salmonella* and to clarify the restated detection limit for coagulase positive *Staphylococcus*.

* - Assigned *ex post facto*