

Milk Whey Protein Standard

Product Definition

Milk Whey Protein is obtained from bovine milk or skim milk by the removal of casein and non-protein constituents from milk so that the finished dry product contains not less than 25% protein. It is obtained by microfiltration and/or chromatography of milk or skim milk and may be preceded or followed by ultrafiltration, nanofiltration, evaporation, dialysis, or any other safe and suitable process in which all or part of the lactose, minerals and moisture may be removed. Products cannot be produced through any process or combination of processes that include enzymatic coagulation of protein and/or acid precipitation of protein in bovine milk or skim milk.

Milk Whey Protein products with a protein content less than 89.5% protein are referred to as Milk Whey Protein Concentrates (or mWPC).

Milk Whey Protein products with a protein content $\geq 89.5\%$ protein on a dry matter basis are referred to as Milk Whey Protein Isolates (or mWPI).

Composition

Several different mWPC or mWPI products are commercially available. These may include:

Product	Protein %	Fat %	Lactose %	Ash %	Moisture %
mWPC 34	Min. 33.5%	Max. 2.0%	Max. 55.0%	Max. 7.50%	Max. 6.0%
mWPC 80	Min. 79.5%*	Max. 2.0%	Max. 13.0%	Max. 5.0%	Max. 6.0%
mWPI 90	Min. 89.5%*	Max. 1.5%	Max. 4.0%	Max. 4.5%	Max. 6.0%

(*) Protein content $\geq 79.5\%$ is reported on a dry basis, all other parameters are reported “as is”

Microbiological Standards and Methods of Analysis

Parameter	Standard	Test Method
Standard Plate Count	30,000cfu/g max	AOAC 966.23
Coliform Bacteria	10cfu/g max	AOAC 989.10 (Petrifilm
Salmonella	Neg.	FDA BAM
Listeria	Neg.	FDA BAM

Parameter	Standard	Test Method
Yeast/Mold	10/g max	FDA BAM
Moisture	See chart	AOAC 927.05 (Vacuum Oven)
Milkfat	See chart	AOAC 989.05 (Mojonnier)
Protein	See chart	SM 15.132 (Kjeldahl)
Ash	See chart	AOAC 900.02 (Gravimetric)
Lactose	See chart	SM 15.092 (Enzymatic)

Other Characteristics

Scorched Particle Content: \leq 15.0 mg
Color Cream
Flavor Bland, Clean

Product Labeling:

“Milk Whey Protein Concentrate (____% protein)”. The percent of protein is declared in 5% increments **OR** as actual percentage, provided an analysis of the product is supplied (e.g. mWPC 25).

“Milk Whey Protein Isolate (____% protein)”. The percent of protein is declared in 2% increments **OR** as actual percentage, provided an analysis of the product is supplied.

Actual designation of the total protein percent in mWPC \geq 79.5% protein (e.g. mWPC 85) and mWPI (e.g. mWPI 92) products is optional.

Product Naming:

Provided the product meets the **Product Definition**, the name of the product is “Milk Whey Protein.” Alternative names include: “Native Whey Protein”, “Milk Derived Whey Protein” or “Milk Soluble Protein.”

Product Applications and Functionality

General sports, adults or medical protein supplement, protein functionality for gelation (yogurts, pudding), whipping (topping and filling), water-binding (meat, sausage), and emulsification (ice cream, margarine, mayonnaise).

Storage & Shipping

Product should be stored and shipped in a cool, dry environment with temperatures below 80°F relative humidities below 65%. Stocks should be rotated and utilized within 1 - 2 years.

Packaging

Multiwall kraft bags with polyethylene inner liner or other suitable closed container – i.e., “tote bins,” etc.