

Skim Milk Powder (SMP) Standard

Product Definition

Skim Milk Powder (SMP) is the product resulting from the partial removal of fat and water from pasteurized milk. The fat and/or protein content of the milk may have been adjusted, only to comply with the compositional requirements below, by the addition and/or withdrawal of milk constituents in such a way as not to alter the whey protein to casein ratio of the milk being adjusted.

The following milk products are allowed for protein adjustment purposes:

- Milk retentate: the product obtained by concentrating milk protein by ultrafiltration of milk, partly skimmed milk, or skimmed milk;
- Milk permeate: the product obtained by removing milk proteins and milkfat from milk, partly skimmed milk, or skimmed milk by ultrafiltration; and
- Lactose

Composition

Classification	Protein (percent protein in milk solids-not-fat)*	Fat	Moisture
SMP	Min. 34%	Max. 1.5%	Max. 5.0%*

* The moisture content does not include water of crystallization of the lactose, the milk solids-not-fat content includes the water of crystallization of the lactose.

Other Characteristics

Scorched Particle Content	≤ 15.0 mg
Titrate acidity	≤ .18%
Color	white to cream
Flavor	bland, clean
Solubility index	<1.0 ml
Staphylococci	<10 cfu/g

Microbiological Analysis

Standard Plate Count	≤ 30,000 cfu/g
Coliform	≤ 10 cfu/g
Salmonella	negative
Listeria	negative
Coagulase positive	
Yeast & Mold	≤ 100 cfu/g

Methods of Analysis

Criteria	Reference Method
Protein	ISO 8968-1/IDF 20 part 1
Fat	ISO 1736/IDF 9C
Moisture	ISO 5537/IDF 26

Product Labeling

Product should be labeled as: “Skim Milk Powder”

SMP Labeling Regulatory Compliance

Although skim milk powder (SMP) is very similar to nonfat dry milk (NDM), the protein level has been adjusted and therefore SMP does not comply with the Standard of Identity (SOI) for NDM. This restricts use in products where the relevant SOI specifies NDM must be used; and when used in other products the ingredient labeling should identify SMP separately to NDM.

Storage & Shipping

Product should be stored and shipped in a cool, dry environment with temperatures below 80°F and relative humidities below 65%. Shelf life is 18-24 months when stored under recommended conditions.

Packaging

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

Reference: Codex Alimentarius Standard 207-1999