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# **Dairy Products**

# Skimmed Milk Powder (Non Fat Dry Milk) Instant and Regular.

Skim milk powder is obtained by removing water from pasteurized skim milk. It contains 5% or less moisture (by weight) and 1.5% or less milk fat (by weight). By removing moisture to the greatest extent possible, microbial growth is prevented. Skim Milk powder is classified for use as an ingredient according to the heat treatment used in its manufacture. There are three main classifications: high-heat (least soluble), medium-heat, and low-heat (most soluble). Skim milk powders are available in spray-dried form. Spray-dried skim milk powder is available in two forms: ordinary or non-agglomerated (non-instant) and agglomerated (instant).

## **Physical & Chemical Specifications:**

- Protein 34.0% min
- Lactose 52.0% max
- Fat 1.25% max
- Ash 8.6% max
- Moisture 4.0% max (non-instant)
- and 4.5% max (instant)

## **Microbiological Specifications:**

- Standard Plate Count
- Coliform
- E.coli
- Salmonella
- Listeria
- Coagulase
- Staphylococci
- Scorched particle content
- Titratable acidity
- Solubility index
- Color
- Flavor

- < 50,000/g max (non-
- < 10/g max (instant)
- Negative
- Negative
- Negative
- Positive
  - Negative
  - 15.0 mg max(spray-dried)
  - 0.15% max
  - < 1.0 ml (instant), < 1.25
  - White to light cream color
  - Clean, pleasing dairy flavor





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# **Heat Treatment:**

- Classification
- Low-heat
- Medium-heat
- High-heat

## **Typical Processing Treatment**

- Cumulative heat treatment of milk not more than 70°C for 2 minutes
- Cumulative heat treatment of 70 -78°C for 20 minutes
- Cumulative heat treatment of 88°C for 30 minutes

#### **Undenatured Whey**

Protein Nitrogen\* (mg/g) > 6.00 1.51 - 5.99 < 1.50

\* Higher temperatures and/or extended holding times contribute directly to whey protein denaturation. This index is used as a measure of the cumulative heat effects during processing of skim milk powder.

#### Shelf Life:

12 months under optimal storage conditions.

#### Packaging:

20 or 25kg bags Kraft paper multi-wall with inner polyethylene liner.