

Summary of IS 14542:1998: Partly Skimmed Milk Powder



Partly Skimmed Milk Powder is a dehydrated dairy product made by removing part of the fat content from whole milk, which is then **dried using spray or roller drying methods**. It is a significant ingredient in various food industries, including **bakery, confectionery, and dairy products**, as it provides a concentrated source of milk solids and proteins. Due to its extended shelf life and easy storage, Partly Skimmed Milk Powder is essential in regions with seasonal milk production variations, allowing for year-round availability. This product plays a vital role in bridging the gap between milk production and consumer consumption, particularly during lean seasons.

The Indian Standard IS 14542:1998 specifies the requirements for **Partly Skimmed Milk Powder**, focusing on its production, **quality control**, and **hygienic packaging**. The standard establishes critical guidelines to ensure **uniformity, safety, and nutritional integrity** throughout the product's lifecycle, from production to consumption.

Key parameters outlined in the standard include **moisture content, total solids, milk fat percentage, and microbiological stability**. The **moisture content** is limited to **4%** to **prevent microbial growth and maintain product shelf life**. The **total solids**, which include both milk solids and added salts, **must comprise a minimum of 96%**, ensuring the powder's nutritional value remains intact. The **milk fat content** is required to range from a **minimum of 1.5% to a maximum of 26%**, which is essential for achieving the **desired texture and flavor** profile of the powder.

Further specifications are set for the **insolubility index**, which measures the powder's ability to rehydrate. For **spray dried powder**, the **insolubility index must not exceed 1.5 ml**, while **roller dried powder** is allowed **up to 2.5 ml**. The **total ash content** must not exceed **8.2%**, ensuring the powder's purity by limiting the presence of inorganic materials. Additionally, titratable acidity (as lactic acid) is capped at **1.5%**, maintaining the product's flavor and preventing sourness.

The product must meet strict **microbiological standards** to ensure safety and quality. Specifically, the **bacterial count should not exceed 50,000 per gram of product**, as verified through IS 5402 testing methods, ensuring controlled levels of microbial content. Additionally, coliform bacteria—indicators of potential contamination—must be absent in 0.1 grams of the product. These microbiological requirements are critical to preventing health risks and ensuring the product's suitability for use. **Packaging clause** mentions requirements for retail as well as bulk packing in airtight, food grade containers to **preserve quality and prevent contamination**, with **mandatory labeling indicating product name, manufacturer, expiry date etc.** Testing and sampling procedures are detailed for consistency and compliance, ensuring that products meet both nutritional and safety standards. This IS harmonizes the standard with the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, ensuring alignment with food safety laws.