



IS 12229:2021 Dairy Whitener – Specification (Second Revision)

Dairy whitener is a product made from cow, buffalo, goat, sheep, or camel milk, or a combination of these. The milk can be adjusted by removing or replacing some of the milk solids with carbohydrates like sucrose, dextrose, or maltodextrins. It's also possible to change the fat or protein content or both, but this must be done without changing the natural ratio of whey protein to casein in the milk.

Consumers expect dairy whitener to be safe, nutritious, and easy to use. They look for a product that is free from harmful bacteria and contaminants, has a good source of protein and calcium, dissolves easily in beverages, and has a pleasant taste and appearance. The product should have a long shelf life and be packaged in a way that preserves freshness.

The Indian Standard **IS 12299:2021** addresses these expectations by setting specific requirements for dairy whitener. It covers various aspects like the allowed ingredients, maximum levels of contaminants, microbiological safety, packaging under hygienic conditions as per IS 2491, and labelling. For instance, the standard limits the amount of moisture, milk fat, milk protein, and total ash, ensuring the nutritional value and quality of the product. It also mandates testing for harmful bacteria like *E. coli*, *S. Aureus*, *Bacillus cereus*, *Listeria*, *Salmonella*, clostridia and Yeast and Mould, guaranteeing consumer safety. Packaging requirements like using nitrogen or a mix of nitrogen and carbon dioxide help preserve the product's freshness and extend its shelf life.

This FAD 19, Indian Standard was originally published in **1988** and **first revised in 1998** to include only **spray drying as the technology for making dairy whitener**, modification in milk solid (non-fat), total ash and microbiological requirements apart from packaging requirements.

The **second revision (in 2021)** harmonize the **standard with FSSAI Regulations** and **the major changes include:**

- a) Inclusion of **four types of dairy whitener** based on the **fat content**;
- b) **Inclusion of requirement of scorched particles** and **modification of requirements for ash**; and
- c) **Alignment of microbiological requirements as per the Food Safety and Standards**

(Food Products Standards and Food Additives) Regulations, 2011.

Packaging and Marking clause mention requirements for retail as well as bulk packing in airtight, foodgrade containers to preserve quality and prevent contamination, with mandatory labeling indicating product name, manufacturer, direction for storage and reconstitution, expiry date etc.