

IS 10904:1984 - Specification for sodium fluoride

Sodium fluoride is widely utilized in dental care and public health initiatives, particularly for its role in preventing tooth decay. The Indian Standard, IS 10904:1984, specifies the requirements for sodium fluoride, focusing on its quality, testing methods, and safety for various applications. This standard aims to ensure uniformity and safety by establishing clear guidelines for the properties and testing of sodium fluoride.

Key specifications include a minimum purity of 98% for sodium fluoride (NaF), ensuring its effectiveness in applications such as water fluoridation and dental products. The compound should appear as a white crystalline powder and must be readily soluble in water, with a pH range of 6.0 to 8.0 for a 1% solution to ensure compatibility with different uses.

The standard specifies limits for various impurities to ensure product safety and efficacy:

- Silica (SiO₂): Maximum of 0.5%
- Sodium Carbonate (Na₂CO₃): Maximum of 0.5%
- Sulfate (as SO₄): Maximum of 0.5%
- Additionally, limits for heavy metals such as lead and arsenic are defined to mitigate potential health risks.

The standard outlines specific testing methods to determine the purity, solubility, and other physical and chemical properties of sodium fluoride. It includes tests for moisture content and heavy metal impurities to further ensure compliance with safety standards.

This standard plays a critical role in ensuring that sodium fluoride products are safe and effective, thus contributing to public health initiatives aimed at improving dental health and preventing tooth decay.