Summary of IS 8824 Part 1: 2022

The Indian Standard IS 8824 Part 1: 2022, titled "Electrical Moisture Meters — Specification Part 1: Food Grains, Seeds, and Flour (First Revision)," outlines the specifications and requirements for electrical moisture meters used to determine the moisture content in food grains, seeds, and flour. This standard supersedes the earlier version, IS 8824 (Part 1): 1978.

Scope

This standard specifies the requirements and tests for mains-operated and battery-operated electrical moisture meters used for determining the moisture content of food grains, such as cereals, pulses, oil seeds, and other granular materials like coffee beans, cotton seeds, and oats.

Types of Moisture Meters

The standard categorizes moisture meters based on their operating principles:

- **Type 1: Conductivity Meters (DC)**: These meters operate on the principle that the electrical conductivity of the material under test is proportional to its moisture content.
- **Type 2: Capacitance Meters (AC)**: These meters function based on the change in the dielectric constant of a material between its moist and dry conditions.

Constructional Features

Key constructional features outlined in the standard include:

- **Compression Unit**: Employed to compress the material to a specific thickness, ensuring uniformity and minimizing porosity effects on electrical conductivity.
- **Electrodes**: The method of presenting the sample varies with the type of product and meter employed. Conductivity meters have electrodes that make physical contact with the material, while capacitance meters may not require such contact.
- **Electrical Unit**: Comprises circuitry that employs bridge balancing techniques with suitable electrical/electronic components.

General Requirements

The standard specifies that moisture meters should be sturdy, compact, and equipped with features such as temperature compensation, calibration check-up mechanisms, appropriately graduated scales, and suitable power supply options.

Accuracy and Measuring Range

Manufacturers are required to declare the accuracy of the moisture meters at 27 ± 2 °C. The measuring range specified is from 8% to 40% moisture content.

Operating Conditions

The moisture meters should perform satisfactorily within a temperature range of 0 °C to 55 °C and at a maximum humidity of 95%.

Marking and Packing

Each moisture meter should be clearly marked with the manufacturer's name or trademark, type of meter, accuracy class, supply voltage, and country of manufacture. Additionally, they should be packed in suitable containers for convenient field use.

Tests

The standard outlines various tests, including insulation resistance, high voltage, and calibration tests, to ensure the reliability and accuracy of the moisture meters.

SOURCES

https://law.resource.org/pub/in/bis/S05/is.8824.1.1978.pdf?utm

https://archive.org/details/gov.in.is.8824.1.2022?utm

https://law.resource.org/pub/in/bis/S05/is.8824.1.1978.pdf

https://www.services.bis.gov.in/php/BIS_2.0/dgdashboard/Published_Standards_new/standards_revised?aspect=&commttid=MTM3&commttname=RkFEIDIw&doe=&from=2022-04-14&to=2023-04-14

https://compfie.aparajitha.com/wp-content/uploads/2022/11/25112022_EHS_02.pdf?utm