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Colloidal Oatmeal

DEFINITION

Colloidal Oatmeal is the powder resulting from the grinding and further processing of whole oat grain meeting U.S. Standards for Number 1 or Number 2 oats (7 CFR 810.1001).

IDENTIFICATION

• **A.**

Analysis: Prepare a smooth mixture of 10 g of Colloidal Oatmeal and 100 mL of warm water. Stir for 10 min.

Acceptance criteria: The resulting slurry has a characteristic slippery feel and shows the development of slimy, viscous strands.

• **B.** A water slurry is colored reddish violet to deep blue by iodine TS.

IMPURITIES

• **Articles of Botanical Origin,** *Total Ash* ⟨561⟩**:** NMT 2.5% on the dried basis

SPECIFIC TESTS

• **Nitrogen Determination,** *Method I* ⟨461⟩**:** NLT 2.0% on the dried basis

• **Microbial Enumeration Tests** ⟨61⟩ and **Tests for Specified Microorganisms** ⟨62⟩**:** The total aerobic microbial count does not exceed 10^4 cfu/g; the total combined molds and yeasts count does not exceed 150 cfu/g.

• **Loss on Drying** ⟨731⟩

Analysis: Dry a sample at 120° for 4 h.

Acceptance criteria: NMT 10%

• **Particle Size Distribution Estimation by Analytical Sieving** ⟨786⟩**:** NMT 3% of the total particles exceed 150 µm in size and NMT 20% of the total particles exceed 75 µm in size.

• **Fat Content**

Sample: 4 g from material previously dried under vacuum at 100° for about 5 h

Analysis: Extract the fat from the *Sample* with anhydrous ethyl ether, using a continuous extraction apparatus, the extraction period being 4 h at a condensation rate of 5–6 drops/s. Evaporate the ether from the extract, transfer it to a tared beaker, and dry at 100° to constant weight. Perform a blank determination. Calculate the percentage of fat found, corrected for the blank.

Acceptance criteria: NLT 0.2% on the previously dried basis

• **Viscosity—Rotational Methods** ⟨912⟩

Sample solution: Transfer 25 g of Colloidal Oatmeal in small portions, with stirring at 1000 rpm over a 1-min period, to 500 mL of water contained in a beaker, maintained at 45° and equipped with a variable speed mixer. Stir for 5 min after the addition of the last portion of oatmeal. Allow the suspension to stand for 90 min, and equilibrate to ambient temperature. Stir the suspension at 800 rpm for 1 min.

Apparatus: Equip a suitable rotational viscometer with a spindle having a cylinder 1.88 cm in diameter and 6.25 cm high attached to a shaft 0.32 cm in diameter, the distance from the top of the cylinder to the lower tip of the shaft being 0.75 cm, and the immersion depth being 8.15 cm (No. 1 spindle).

Analysis: Determine and record the viscosity of the suspension, with the spindle rotating at 60 rpm. Convert to centipoise by multiplying the reading by the constant for the viscometer spindle and speed employed.

Acceptance criteria: The average of three viscosities obtained is greater than 1 and less than 100 centipoises.

ADDITIONAL REQUIREMENTS

• **Packaging and Storage:** Preserve in well-closed containers.

Topic/Question	Contact	Expert Committee
COLLOIDAL OATMEAL	Documentary Standards Support	SM32020 Small Molecules 3

Chromatographic Database Information: Chromatographic Database

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