

Starch, Soluble

Part 4, Monographs for Reagent Chemicals: General Descriptions, Specifications, and Tests

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ABSTRACT

This monograph for Starch, Soluble provides, in addition to common physical constants, a general description including typical appearance, applications, and aqueous solubility. The monograph also details the following specifications and corresponding tests for verifying that a substance meets ACS Reagent Grade specifications including: Solubility, pH of a 2% Solution at 25.0 °C, Residue after Ignition, and Sensitivity.

CAS No. 9005-84-9

GENERAL DESCRIPTION

Typical appearance white solid
Applications indicator; iodometry
Aqueous solubility soluble in water

SPECIFICATIONS

Solubility Passes test
pH of a 2% solution at 25.0 °C 5.0-7.0
Residue after ignition ≤0.4%
Sensitivity Passes test

TESTS

Solubility

Prepare a paste of 2.0 g of the sample with a little cold water, and add to it with stirring 100 mL of boiling water. The solution should be no more than opalescent, and on cooling it should remain liquid and not increase in opalescence.

pH of a 2% Solution at 25.0 °C

[Part 2: Direct Electrometric Methods; pH Potentiometry; pH Range; Procedure for pH of a 5% Solution at 25.0 °C]. Use the solution obtained in the test for solubility.

Residue after Ignition

[Part 2: Gravimetric Methods; Residue after Ignition]. Ignite 1.0 g, and moisten the char with 1 mL of sulfuric acid.

Sensitivity

Prepare a paste of 1.0 g of the sample with a little cold water, and add it with stirring to 200 mL of boiling water. Cool, and add 5 mL of this solution to 100 mL of water containing 50 mg of potassium iodide, and add 0.05 mL of 0.1 N iodine volumetric solution. A deep blue color should be produced, which will be discharged by 0.05 mL of 0.1 N sodium thiosulfate volumetric solution.