

tion add 8 mL of dilute nitric acid and water to make 50 mL. Perform the test using this solution as the test solution. Prepare the control solution with 0.7 mL of 0.01 mol/L hydrochloric acid VS (not more than 0.050%).

(3) Heavy metals—Dissolve 1.0 g of Potassium Hydroxide in 5 mL of water, add 7 mL of dilute hydrochloric acid, and evaporate on a water bath to dryness. Dissolve the residue in 35 mL of water, 2 mL of dilute acetic acid and 1 drop of ammonia TS, add water to make 50 mL, and perform the test using this solution as the test solution. Prepare the control solution as follows: evaporate 7 mL of dilute hydrochloric acid on a water bath to dryness, dissolve the residue in 2 mL of dilute acetic acid and 3.0 mL of Standard Lead Solution, and add water to make 50 mL (not more than 30 ppm).

(4) Sodium—Dissolve 0.10 g of Potassium Hydroxide in 10 mL of dilute hydrochloric acid, and perform the test as directed under the Flame Coloration Test (1): no persistent yellow color develops.

(5) Potassium carbonate—The amount of potassium carbonate (K_2CO_3 : 138.21) is not more than 2.0% when calculated by the following equation using B (mL) obtained in the Assay.

$$\text{Amount of potassium carbonate (mg)} = 138.21 \times B$$

Assay Weigh accurately about 1.5 g of Potassium Hydroxide, and dissolve in 40 mL of freshly boiled and cooled water. Cool the solution to 15°C, add 2 drops of phenolphthalein TS, and titrate with 0.5 mol/L sulfuric acid VS until the red color of the solution disappears. Record the amount A (mL) of 0.5 mol/L sulfuric acid VS consumed, then add 2 drops of methyl orange TS, and titrate again with 0.5 mol/L sulfuric acid VS until the solution changes to a persistent light red color. Record the amount B (mL) of 0.5 mol/L sulfuric acid VS consumed.

Calculate the amount KOH from the amount, A (mL) – B (mL).

$$\begin{aligned} \text{Each mL of 0.5 mol/L sulfuric acid VS} \\ = 56.11 \text{ mg of KOH} \end{aligned}$$

Containers and storage Containers—Tight containers.

Potassium Sulfate

硫酸カリウム

K_2SO_4 : 174.26

Potassium Sulfate, when dried, contains not less than 99.0% of K_2SO_4 .

Description Potassium Sulfate occurs as colorless crystals or a white, crystalline powder. It has a slightly saline, somewhat bitter taste.

It is soluble in water and practically insoluble in ethanol (95).

Identification A solution of Potassium Sulfate (1 in 20) responds to the Qualitative Tests for potassium salt and for sulfate.

Purity (1) Clarity and color of solution, and acid or alkali—Dissolve 1.0 g of Potassium Sulfate in 20 mL of water: the solution is clear, colorless and neutral.

(2) Chloride—Perform the test with 0.5 g of Potassium Sulfate. Prepare the control solution with 0.40 mL of 0.01 mol/L hydrochloric acid VS (not more than 0.028%).

(3) Heavy metals—Proceed with 2.0 g of Potassium Sulfate according to Method 1, and perform the test. Prepare the control solution with 2.0 mL of Standard Lead Solution (not more than 10 ppm).

(4) Sodium—Dissolve 1.0 g of Potassium Sulfate in 20 mL of water, and perform the test as directed under the Flame Coloration Test (1): no persistent yellow color develops.

(5) Arsenic—Prepare the test solution with 0.40 g of Potassium Sulfate according to Method 1, and perform the test using Apparatus B (not more than 5 ppm).

Loss on drying Not more than 1.0% (1 g, 110°C, 4 hours).

Assay Weigh accurately about 0.5 g of Potassium Sulfate, previously dried, boil with 200 mL of water and 1.0 mL of hydrochloric acid, and add gradually 8 mL of boiling barium chloride TS. Heat the mixture on a water bath for 1 hour, collect the precipitate, and wash the precipitate with water until the last washing shows no opalescence on the addition of silver nitrate TS. Dry, heat strongly to constant mass between 500°C and 600°C by raising the temperature gradually, and weigh as barium sulfate ($BaSO_4$: 233.39).

$$\begin{aligned} \text{Amount (mg) of } K_2SO_4 \\ = \text{amount (mg) of barium sulfate (BaSO}_4) \times 0.7466 \end{aligned}$$

Containers and storage Containers—Well-closed containers.

Potato Starch

Amylum Solani

バレイショデンプン

Potato Starch consists of starch granules derived from the tuber of *Solanum tuberosum* Linné (*Solanaceae*).

Description Potato Starch occurs as a white powder. It is odorless and tasteless.

Under a microscope, Potato Starch appears as mainly ellipsoid or ovate, simple grains 70–90 μm , often 100 μm , in major axis, and rarely as 2-compound or half-compound grains. Hilum is eccentric; striations are distinct.

It is practically insoluble in water and in ethanol (95).

Identification (1) To 1 g of Potato Starch add 50 mL of water, boil, and allow to cool: a turbid, neutral and pasty liquid is formed.

(2) To a portion of Potato Starch add iodine TS: a dark blue-purple color develops.

Purity Foreign matter—Under a microscope, Potato Starch does not contain starch grains of any other origin. It may contain a minute quantity, if any, of fragments of the tissue of the original plant.