

Tragacanth Gum

{ 9000-65-1 }

Definition Tragacanth Gum mainly consists of polysaccharides, obtained from the secretion of tragacanth trees .

Description Tragacanth Gum occurs as a white to whitish powder or white to light yellowish white translucent flattened or laminar flake, and it is odorless .

Identification (1) To 1 g of powdered Tragacanth Gum, add 50 ml of water. An almost uniform, somewhat turbid viscous solution is formed.

(2) Place about 1.0 g of powdered Tragacanth Gum into a watch glass containing 2 - 3 drops of a mixture of water and glycerol (1 : 1) and 1 drop of Iodine TS. Mix well with a top of small glass rod cautiously, being careful to avoid air bubbles in it. Allow to stand for 10 minutes or more and swell it. Apply small amount of swelled sample to a slide glass with a top of small glass rod, add 1 drop of a mixture of water and glycerol (1 : 1). Cover it with a cover glass, being avoid air bubbles in, and observe it by an optical microscope. A little blue granular of starch is found. For microscopic observation, use 10 or 40 times scale as an objective and 10 times scale as an eyepiece.

Purity (1) Hydrochloric acid insoluble matter Not more than 2.0 %.

Previously, dry a glass filter(1G3) for 30minutes at 110 °C, cool in a desiccators, and weigh accurately. Accurately weigh about 0.2 g of powdered Tragacanth Gum, add 95 ml of methanol, moisten and swell the powder. Add 60 ml of hydrochloric acid and boiling chips, heat with a reflux condenser for 3 hours in a water bath while shaking occasionally. Filter by suction while warming using the glass filter. Wash well the residue with warm water, and wash with 40 ml of methanol again. Dry for 2 hours at 105 °C together with the residue and the glass filter. Allow to cool in a desiccator, and weigh accurately.

(2) Karaya gum Weigh accurately about 1.0 g of Tragacanth Gum, add 20 ml of water, and heat until the sample becomes an uniformly viscous solution. Add 5 ml of hydrochloric acid, and boil 5 minutes. No light red to red color is produced.

(3) Heavy metals Not more than 40 µg/g as Pb (1.0 g, Method 2, Control solution Lead Standard Solution 4.0 ml).

(4) Lead Not more than 10 µg/g as Pb (1.0 g, Method 1).

(5) Arsenic Not more than 4.0 µg/g as As₂O₃ (0.50 g, Method 3, Apparatus B).

Loss on Drying Not more than 17.0 % (105 °C, 5 hours).

Ash Not more than 4.0 %.

Acid-insoluble ash Not more than 0.50 %.

Microbial Limits Total viable aerobic count is not more than 10,000/g and no *Escherichia coli* is observed.