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Pyroxylin

Cellulose, nitrate.

Pyroxylin

CAS RN®: 9004-70-0; UNII: KYR8BR2X6O.

» Pyroxylin is a product obtained by the action of a mixture of nitric and sulfuric acids on cotton and consists chiefly of cellulose tetranitrate $(C_{12}H_{16}N_4O_{18})_n$.

[NOTE—Dry Pyroxylin is a light yellow, matted mass of filaments, resembling raw cotton in appearance, but harsh to the touch. *It is exceedingly flammable*, burning, when unconfined, very rapidly and with a luminous flame. When kept in well-closed bottles and exposed to light, it is decomposed with the evolution of nitrous vapors, leaving a carbonaceous residue.]

Pyroxylin available commercially is moistened with about 30 percent of alcohol or other suitable solvent. The alcohol or other solvent must be allowed to evaporate from the Pyroxylin to yield the dried substance described in this Pharmacopeia. Pyroxylin moistened with alcohol or other solvent may be used in the tests set forth in this monograph, provided the weight of test specimen taken corresponds to the specified amount of dry Pyroxylin.

Packaging and storage—Preserve loosely packed in cartons, protected from light.

Labeling—The label bears a caution statement to the effect that Pyroxylin is highly flammable.

VISCOSITY—ROTATIONAL METHODS ⟨912⟩—Dissolve 48.8 g in a mixture of 88 g of alcohol and 193.2 g of toluene, and when solution is complete, add 70 g of ethyl acetate, and mix. Transfer the solution to the cup of a rotational type of viscometer, adjust the temperature to 25°, and determine the viscosity, making certain that the apparent viscosity reaches equilibrium before taking the final reading: the viscosity is between 110 and 147 poises.

RESIDUE ON IGNITION ⟨281⟩—Saturate about 500 mg, accurately weighed, with alcohol in a dish placed in cold water, and ignite the Pyroxylin at the top. When combustion is complete, heat the dish to redness, and cool: not more than 0.3% of residue remains.

Acidity and water-soluble substances—Stir 1.0 g with 20 mL of water for 10 minutes, and filter: the filtrate does not have an acid reaction to litmus. Evaporate 10 mL of the filtrate on a steam bath to dryness, and dry the residue at 105° for 1 hour: not more than 1.5 mg of residue remains.

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
PYROXYLIN	Documentary Standards Support	SM32020 Small Molecules 3
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM32020 Small Molecules 3

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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