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Precipitated Sulfur

S 32.07

Sulfur CAS RN®: 7704-34-9; UNII: 70FD1KFU70.

DEFINITION

Precipitated Sulfur contains NLT 99.5% and NMT 100.5% of sulfur (S), calculated on the anhydrous basis.

IDENTIFICATION

• **A.** It burns in the air to sulfur dioxide, which can be recognized by its characteristic odor.

ASSAY

• **Procedure**

Sample: 60 mg of Precipitated Sulfur

Titrimetric system

Mode: Direct titration

Titrant: 0.1 N sodium hydroxide VS

Endpoint detection: Visual

Analysis: Proceed as directed in *Oxygen Flask Combustion* ⟨471⟩, using a 1000-mL flask and using a mixture of 10 mL of water and 5.0 mL of hydrogen peroxide TS as the absorbing liquid. When the combustion is complete, fill the lip of the flask with water; loosen the stopper; then rinse the stopper, the sample holder, and the sides of the flask with water; and remove the stopper assembly. Heat the contents of the flask to boiling, and boil for 2 min. Cool to room temperature, add phenolphthalein TS, and titrate with *Titrant*. Perform a blank determination, and make any necessary correction. Each mL of 0.1 N sodium hydroxide is equivalent to 1.603 mg of sulfur (S).

Acceptance criteria: 99.5%–100.5% on the anhydrous basis

OTHER COMPONENTS

• **Other Forms of Sulfur**

Sample: 1.0 g

Analysis: Shake the *Sample* with 5 mL of carbon disulfide.

Acceptance criteria: It dissolves quickly, with the exception of a small quantity of insoluble matter that is usually present.

IMPURITIES

• **Residue on Ignition** ⟨281⟩**:** NMT 0.3%

SPECIFIC TESTS

• **Water Determination,** *Method I* ⟨921⟩**:** NMT 0.5%

• **Reaction**

Sample: 2.0 g

Analysis: Agitate the *Sample* with 10 mL of water, and filter.

Acceptance criteria: The filtrate is neutral to litmus.

ADDITIONAL REQUIREMENTS

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

Topic/Question	Contact	Expert Committee
PRECIPITATED SULFUR	Documentary Standards Support	SM12020 Small Molecules 1
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM12020 Small Molecules 1

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
Pharmacopeial Forum: Volume No. Information currently unavailable

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