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Potassium Metabisulfite

$K_2S_2O_5$ 222.32
Disulfurous acid, dipotassium salt;
Dipotassium pyrosulfite CAS RN[®]: 16731-55-8.

DEFINITION

Potassium Metabisulfite contains an amount of $K_2S_2O_5$ equivalent to NLT 51.8% and NMT 57.6% of SO_2 .

IDENTIFICATION

- **A. IDENTIFICATION TESTS—GENERAL, [Potassium \(191\)](#) and [Sulfite \(191\)](#):** A solution (1 in 20) meets the requirements.

ASSAY

• **PROCEDURE**

Sample: 250 mg of Potassium Metabisulfite

Titrimetric system

(See [Titrimetry \(541\)](#).)

Mode: Residual titration

Titrant: 0.1 N iodine VS

Back titrant: 0.1 N sodium thiosulfate VS

Endpoint detection: Visual

Analysis: Transfer the *Sample* to a glass-stoppered conical flask containing 50.0 mL of 0.1 N iodine VS, and swirl to dissolve. Allow to stand for 5 min, protected from light, and then add 1 mL of hydrochloric acid. Titrate the excess iodine with 0.1 N sodium thiosulfate VS, adding 3 mL of starch TS as the endpoint is approached.

Calculate the percentage of SO_2 in the portion of *Sample* taken:

$$\text{Result} = \{[(V_B - V_S) \times N \times F] / W\} \times 100$$

V_B = Back titrant volume consumed by the *Blank* (mL)

V_S = Back titrant volume consumed by the *Sample* (mL)

N = Back titrant actual normality (mEq/mL)

F = equivalency factor, 32.03 mg/mEq

W = weight of the *Sample* (mg)

Acceptance criteria: 51.8%–57.6% of SO_2

IMPURITIES

Change to read:

- **▲ [IRON \(241\)](#), [Procedures, Procedure 1](#) ▲** (CN 1-JUN-2023)

Test preparation: Dissolve 1.00 g in 14 mL of dilute hydrochloric acid (2 in 7), and evaporate on a steam bath to dryness. Dissolve the residue in 7 mL of dilute hydrochloric acid (2 in 7), and again evaporate to dryness. Dissolve the resulting residue in a mixture of 2 mL of hydrochloric acid and 20 mL of water. Add 3 drops of bromine TS, and boil to expel the bromine. Cool, and dilute with water to 47 mL.

Acceptance criteria: NMT 10 ppm

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in well-fitted, tight containers, and avoid exposure to excessive heat.

Topic/Question	Contact	Expert Committee
POTASSIUM METABISULFITE	Documentary Standards Support	SE2020 Simple Excipients
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SE2020 Simple Excipients

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

Pharmacopeial Forum: Volume No. Information currently unavailable

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