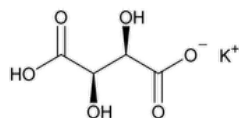


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## Potassium Bitartrate



$C_4H_5KO_6$  188.18

Butanedioic acid 2,3-dihydroxy-, [*R*-(*R*\*,*R*\*)]-, monopotassium salt;

Potassium hydrogen tartrate CAS RN<sup>®</sup>: 868-14-4; UNII: NPT6P8P3UU.

### DEFINITION

Potassium Bitartrate, dried at 105° for 3 h, contains NLT 99.0% and NMT 101.0% of  $C_4H_5KO_6$ .

### IDENTIFICATION

- **A.** Ignite it: it leaves a residue that imparts a reddish purple color to a nonluminous flame.
- **B.** A saturated solution of it yields a yellowish orange precipitate with sodium cobaltinitrite TS.
- **C.** [IDENTIFICATION TESTS—GENERAL, Tartrate\(191\)](#): Meets the requirements

### ASSAY

#### • PROCEDURE

**Sample:** Dry 6 g of Potassium Bitartrate at 105° for 3 h. Allow to cool, and weigh.

**Analysis:** Dissolve the *Sample* in 100 mL of boiling water, add a few drops of phenolphthalein TS, and titrate with 1 N sodium hydroxide VS to a pink endpoint. Perform a blank determination (see [Titrimetry\(541\)](#)). Each mL of 1 N sodium hydroxide is equivalent to 188.2 mg of  $C_4H_5KO_6$ .

**Acceptance criteria:** 99.0%–101.0% on the previously dried basis

### IMPURITIES

#### • INSOLUBLE MATTER

**Sample:** 500 mg

**Analysis:** Mix the *Sample* with 3 mL of 6 N ammonium hydroxide.

**Acceptance criteria:** No undissolved residue remains.

#### • LIMIT OF AMMONIA

**Sodium hypochlorite solution:** Use a commercially available solution that contains 4.0%–6.0% of sodium hypochlorite.

**Oxidizing solution:** [NOTE—Prepare on the day of use.] Alkaline sodium citrate TS and *Sodium hypochlorite solution* (4:1)

**Diluted sodium nitroferricyanide solution:** Sodium nitroferricyanide TS and water (1:10)

**Standard stock solution:** Dry 300 mg of ammonium chloride over silica gel for 4 h, and use it to prepare a 0.3 mg/mL solution in water. This solution contains 100 µg/mL of ammonia.

**Standard solution:** 0.25 µg/mL of ammonia in water, from *Standard stock solution*

**Sample solution:** 2.5 mg/mL of Potassium Bitartrate in water. Heat gently to facilitate the dissolution.

#### Analysis

[NOTE—Carefully follow the order of addition stated below.]

Separately transfer 6.0 mL each of the *Standard solution* and the *Sample solution* to two color-comparison tubes. To each tube add 0.4 mL of phenol TS, 0.4 mL of *Diluted sodium nitroferricyanide solution*, and 1.0 mL of *Oxidizing solution*. Dilute with water to 10 mL, mix, and allow to stand for 1 h.

**Acceptance criteria:** The color of the *Sample solution* is not darker than the color of the *Standard solution* (NMT 0.01%).

### ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in tight containers.

**Auxiliary Information** - Please [check for your question in the FAQs](#) before contacting USP.

| Topic/Question             | Contact                                                                     | Expert Committee          |
|----------------------------|-----------------------------------------------------------------------------|---------------------------|
| POTASSIUM BITARTRATE       | <a href="#">Documentary Standards Support</a>                               | SM32020 Small Molecules 3 |
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