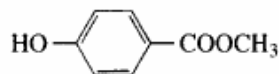


Methylparaben

Methyl *p*-Hydroxybenzoate



$C_8H_8O_3$

Formula wt 152.15

CAS: [99-76-3]

DESCRIPTION

Small, colorless crystals or a white, crystalline powder. It is odorless or has a faint, characteristic odor and a slight, burning taste. One g dissolves in about 400 mL of water at 25°, in about 50 mL of water at 80°, in 2.5 mL of alcohol, in about 7 mL of ether, and in about 4 mL of propylene glycol. It is slightly soluble in glycerin and in fixed oils.

Functional Use in Foods Preservative; antimicrobial agent.

REQUIREMENTS

Identification Dissolve 500 mg in 10 mL of 1 *N* sodium hydroxide, boil for 30 min, allow the solution to evaporate to a volume of about 5 mL, and cool. Acidify the solution with 2 *N* sulfuric acid, collect the crystals on a filter, wash several times with small portions of water, and dry in a desiccator over silica gel. The *p*-hydroxybenzoic acid so obtained melts between 212° and 217° (see Appendix IIB, *Melting Range or Temperature*).

Assay Not less than 99.0% and not more than 100.5% of $C_8H_8O_3$, calculated on the dried basis.

Acidity Passes test.

Heavy Metals (as Pb) Not more than 10 mg/kg.

Loss on Drying Not more than 0.5%.

Melting Range Between 125° and 128°.

Residue on Ignition Not more than 0.05%.

TESTS

Assay Transfer about 2 g, accurately weighed, into a flask, add 40.0 mL of 1 *N* sodium hydroxide, and rinse the sides of the flask with water. Cover with a watch glass, boil gently for 1 h, cool, and titrate the excess sodium hydroxide with 1 *N* sulfuric acid to pH 6.5. Perform a blank determination with the same quantities of the same reagents in the same manner, and make any necessary correction (see *General Provisions*). Each mL of 1 *N* sodium hydroxide is equivalent to 152.2 mg of $C_8H_8O_3$, calculated on the dried basis.

Acidity Heat 750 mg with 15 mL of water at 80° for 1 min, cool, and filter. The filtrate is acid or neutral to litmus. To 10 mL of the filtrate add 0.2 mL of 0.1 *N* sodium hydroxide and 2 drops of methyl red TS. The solution is yellow, without even a light cast of pink.

Heavy Metals, Appendix IIIB Dissolve 2 g in 23 mL of acetone, and add 2 mL of 1 *N* acetic acid, 2 mL of water, and

10 mL of hydrogen sulfide TS. Any color does not exceed that produced in a control (*Solution A*) made with 23 mL of acetone, 2 mL of 1 N acetic acid, 2 mL of *Standard Lead Solution* (20 µg Pb ion), and 10 mL of hydrogen sulfide TS.

Loss on Drying, Appendix IIC Dry over silica gel for 5 h.

Melting Range Determine as directed for *Melting Range or Temperature*, Appendix IIB.

Residue on Ignition Ignite 4 g as directed in the general method, Appendix IIC.

Packaging and Storage Store in well-closed containers.