Ethanol for Disinfection

Alcohol for Disinfection

消毒用エタノール

Ethanol for Disinfection contains not less than 76.9 vol% and not more than 81.4 vol% (by specific gravity) of ethanol (C_2H_6O: 46.07) at 15°C.

Method of preparation

Ethanol	830 mL
Purified Water	a sufficient quantity
	To make 1000 mL

Prepare by mixing the above ingredients.

Description Ethanol for Disinfection is a colorless, clear liquid. It has a characteristic odor and a burning taste.

It is miscible with water.

It burns with a light blue flame on ignition.

It is volatile.

Identification Proceed as directed in the Identification under Ethanol.

Specific gravity d_{15}^{15}: 0.860 - 0.873

Purity **(1)** Clarity of solution—Proceed as directed in the Purity (1) under Ethanol.

(2) Acid or alkali—Proceed as directed in the Purity (2) under Ethanol.

(3) Chloride—Proceed as directed in the Purity (3) under Ethanol.

(4) Heavy metals—Proceed as directed in the Purity (4) under Ethanol.

(5) Fusel oil constituents—Proceed as directed in the Purity (5) under Ethanol.

(6) Aldehyde and other foreign reducing substances—Proceed as directed in the Purity (6) under Ethanol.

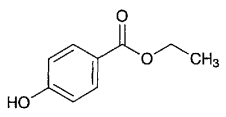
(7) Residue on evaporation—Proceed as directed in the Purity (8) under Ethanol.

Containers and storage Containers—Tight containers.

Storage—Light-resistant, and remote from fire.

Ethyl Parahydroxybenzoate

パラオキシ安息香酸エチル



$C_9H_{10}O_3$: 166.17

Ethyl 4-hydroxybenzoate [*120-47-8*]

Ethyl Parahydroxybenzoate, when dried, contains not less than 99.0% of $C_9H_{10}O_3$.

Description Ethyl Parahydroxybenzoate occurs as colorless crystals or a white, crystalline powder. It is odorless and tasteless, numbing the tongue.

It is freely soluble in ethanol (95), in acetone and in diethyl ether, sparingly soluble in hot water, and very slightly soluble in water.

Its saturated solution is slightly acidic.

Identification **(1)** Dissolve 0.25 g of Ethyl Parahydroxybenzoate in 5 mL of dilute ethanol, and add 1 drop of iron (III) chloride TS: a red-purple color develops.

(2) Boil 0.5 g of Ethyl Parahydroxybenzoate with 10 mL of sodium hydroxide TS for 30 minutes, allowing the solution to evaporate to about 5 mL. After cooling, acidify with dilute sulfuric acid, collect the precipitate formed, wash thoroughly with a small amount of water, and dry in a desiccator (silica gel): the precipitate melts between 213°C and 217°C.

(3) To 0.05 g of Ethyl Parahydroxybenzoate add 2 drops of acetic acid (31) and 5 drops of sulfuric acid, and heat the mixture for 5 minutes: the odor of ethyl acetate is perceptible.

Melting point 116 - 118°C

Purity **(1)** Chloride—Heat 2.0 g of Ethyl Parahydroxybenzoate with 50 mL of water, allow to stand in ice water for 1 hour with occasional shaking, add water to make 100 mL, and filter. Perform the test with 25 mL of the filtrate. Prepare the control solution with 0.50 mL of 0.01 mol/L hydrochloric acid VS (not more than 0.035%).

(2) Sulfate—Perform the test with 40 mL of the filtrate obtained in Purity (1). Prepare the control solution with 0.40 mL of 0.005 mol/L sulfuric acid VS (not more than 0.024%).

(3) Heavy metals—Dissolve 1.0 g of Ethyl Parahydroxybenzoate in 25 mL of acetone, add 2 mL of dilute acetic acid and water to make 50 mL, and perform the test using this solution as the test solution. Prepare the control solution as follows: to 2.0 mL of Standard Lead Solution add 25 mL of acetone, 2 mL of dilute acetic acid, and water to make 50 mL (not more than 20 ppm).

(4) Parahydroxybenzoic acid and salicylic acid—Dissolve 0.5 g of Ethyl Parahydroxybenzoate in 30 mL of diethyl ether, shake with 20 mL of a solution of sodium hydrogen carbonate (1 in 100), wash the separated aqueous layer with two 20-mL portions of diethyl ether, shake the aqueous layer with 5 mL of dilute sulfuric acid and 30 mL of diethyl ether, and allow to stand. Shake gently the separated diethyl ether layer with 10 mL of water, remove the aqueous layer after allowing the mixture to stand, filter the diethyl ether solution, wash the vessel and the filter paper with a small amount of diethyl ether, evaporate the diethyl ether from the combined filtrate and washings on a water bath, and dry the residue in a desiccator (silica gel) to constant mass: the mass of the residue is not more than 5.0 mg. Warm the residue with 5 mL of water, filter, and to the filtrate add 2 to 3 drops of dilute iron (III) chloride TS: no purple color develops.

(5) Readily carbonizable substances—Perform the test with 0.50 g of Ethyl Parahydroxybenzoate. The solution has no more color than Matching Fluid D.

Loss on drying Not more than 0.5% (2 g, silica gel, 3 hours).

Residue on ignition Not more than 0.10% (1 g).