D. MONOGRAPHS

Acetic Acid, Glacial

CH_3COOH

$C_2H_4O_2$ Mol. Wt. 60.05

Acetic acid 〔64-19-7〕

Content Glacial Acetic Acid contains not less than 99.0% of acetic acid ($C_2H_4O_2$)

Description Glacial Acetic Acid occurs as colorless or white crystalline lumps or is a colorless and clear liquid. It has a characteristic pungent odor.

Identification (1) Glacial Acetic Acid solution (1 → 4) is acidic.

(2) Glacial Acetic Acid solution (1 → 4) responds to all tests for Acetate as described in the Qualitative Tests.

Purity (1) Congealing point Not less than 14.5℃.

(2) Heavy metals Not more than 10 μg/g as Pb (2.0 g, Method 1, control solution Lead Standard Solution 2.0 ml).

(3) Arsenic Not more than 4.0 μg/g as As_2O_3 (0.5 0g, Method 1, Apparatus B).

(4) Readily oxidizable substances Weigh 2.0 g of Glacial Acetic Acid, dissolve in 10 ml of water, and add 0.10 ml of 0.2 mol/l potassium permanganate. The pink color of the solution does not disappear within 30 minutes.

(5) Residue on evaporation Not more than 0.010%.

Weigh 20.0 g of Glacial Acetic Acid, evaporate, dry at 100℃ for 2 hours, and weigh the residue.

Assay Weigh accurately about 1 g of Glacial Acetic Acid, and add 40 ml of water. Titrate with 1 mol/l sodium hydroxide (indicator: 2 drops of phenolphthalein TS).

1 ml of 1 mol/l sodium hydroxide = 60.05 mg of $C_2H_4O_2$