Acetaldehyde

Ethanal

CH_3CHO **Formula Wt 44.05** **CAS No.75-07-0**

GENERAL DESCRIPTION

Typical appearance: liquid with pungent odor
Analytical use: standard in chromatography and polarography
Change in state (approximate): boiling point, 21 °C
Aqueous solubility: miscible with water
Density: 0.79

SPECIFICATIONS

Assay	≥99.5% CH_3CHO
	Maximum Allowable
Residue after evaporation	0.005%
Titrable acid	0.008 meq/g

TESTS

Assay. Analyze the sample by gas chromatography using the general parameters cited on page 80. The following specific conditions are also required.

Column: Type I, methyl silicone

Detector: Flame ionization

Measure the area under all peaks, and calculate the area percent for acetaldehyde.

Residue after Evaporation. (Page 25). Evaporate 40 g (51 mL) to dryness in a tared, preconditioned platinum dish on a hot plate (≈100 °C) in a well-ventilated hood, and dry the residue at 105 °C for 30 min.

Titrable Acid. Work in a fume hood. Chill 25 g (32 mL) of sample in a graduated cylinder in an ice bath. To a 250-mL Erlenmeyer flask, add about 25 mL of deionized water and 75 g of deionized ice. Add 0.5 mL of phenolphthalein indicator solution, and titrate with 0.1 N sodium hydroxide to the first perceptible pink color that persists for 15 s. Add the chilled sample and titrate immediately to the same faint pink color. Not more than 2.0 mL of 0.1 N sodium hydroxide should be required.