Acetohydroxamic Acid
Item No. 23979

CAS Registry No.: 546-88-3
Formal Name: N-hydroxy-acetamide
Synonyms: AHA, NSC 5073, NSC 176136, NSC 408425
MF: C₂H₅NO₂
FW: 75.1
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acetohydroxamic acid (AHA) is supplied as a solid. A stock solution may be made by dissolving the AHA in the solvent of choice, which should be purged with an inert gas. AHA is slightly soluble in methanol.

AHA is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

AHA is an irreversible inhibitor of urease and a derivative of hydroxyurea (Item No. 23725). It inhibits the growth of struvite crystals produced by P. mirabilis in artificial urine and the growth of H. pylori in vitro (MICs = 200 and 400 mg/L for various isolates of H. pylori). Chronic AHA administration in dogs dose-dependently reduces urine urease activity, pH, and crystalluria and inhibits growth of bladder stones. It also decreases gastritis, gastric lesions, and bacterial infection rates in Mongolian gerbils when administered at 2,500 ppm/animal following H. pylori infection. Formulations containing AHA have been used in the treatment of urinary tract infections.

References