

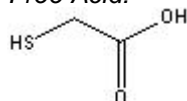
TECHNICAL INFORMATION

Catalog Number: 102933, 103036

Thioglycolic Acid

Structure:

Free Acid:



Molecular Formula: C₂H₄O₂S

Molecular Weight: 92.12

CAS # 68-11-1

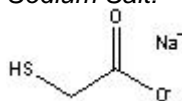
Synonyms: Mercaptoacetic acid; Sodium thioglycolate;
2-Mercaptoacetic acid

Density: Approximately 1.32 g/ml

Physical Description: Clear, colorless liquid

Solubility: Miscible with water, alcohol, ether, chloroform,
benzene, and many other organic solvents

Sodium Salt:



Molecular Formula: C₂H₃O₂SNa

Molecular Weight: 114.1

CAS # 367-51-1

Physical Description: White crystalline powder

Solubility: Soluble in water (100 mg/ml - clear to slightly
hazy, colorless to slight pinkish solution). Slightly soluble in
alcohol

Notes:

- Products are easily oxidized by air (especially in aqueous solutions).
- At room temperature, concentrations over about 70% in water tend to form 1-2% thioglycolides per month which hydrolyze to the original free compound when made acid or alkaline. The 70% solution oxidizes in air but is stable at room temperature when tightly closed. The exclusion of air does not markedly improve stability.
- The sodium salt form will lose purity on storage over prolonged periods, especially at higher temperatures.
- Can cause severe burns and blistering.

Description: A reagent that protects tryptophan in amino acid analysis,³ and also mediates formation of ATP from ADP.² Lowers the oxidation-reduction potential and neutralises mercurial preservatives. An inhibitor of fatty acid oxidation.^{8,11} An agent that prevents the metabolism of fatty acids and stimulates feeding.^{9,12,13} The sodium salt form is typically used in production of bacteriological culture media. The free acid is used as a reagent for the sensitive detection of iron (a blue color appears in the presence of ferric iron, and when an alkali hydroxide is added to a solution containing ferrous salts and thioglycolic acid, a yellow precipitate forms), molybdenum⁷, silver and tin¹; used for the extraction and spectrophotometric determination of various transition metals such as lead⁴, tungsten⁵, molybdenum⁶ and titanium.⁷

Availability:

Catalog Number	Description	Size
103036	Thioglycolic Acid, free acid	50 ml 100 ml 500 ml
102933	Thioglycolic acid, sodium salt	25 g 100 g 500 g

References:

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