



SIGMA-ALDRICH

3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Sodium hydroxide ACS Reagent

Product Number **S 0899**
Store at Room Temperature
22,146-5 is an exact replacement for S 0899

Product Description

Molecular Formula: NaOH
Molecular Weight: 40.00
CAS Number: 1310-73-2
Synonyms: caustic soda, soda lye¹

This product is in the form of pellets. It is designated as ACS Reagent grade and meets the specifications of the American Chemical Society (ACS) for reagent chemicals.

Sodium hydroxide (NaOH) is a caustic reagent that is widely used to neutralize acids and prepare sodium salts of reagents.¹ It is also used in a variety of large-scale applications, such as pulp and paper manufacturing, the manufacture of soap and detergents, and water treatment.

Sodium hydroxide is utilized in the Maxam-Gilbert DNA sequencing technique.^{2,3} An RNA gel blot procedure that uses 50 mM NaOH for simultaneous transfer and fixing of RNA to a positively charged nylon membrane has been described.⁴ The decontamination of mycobacterial isolates using a sodium lauryl sulfate (SDS)/sodium hydroxide protocol has been reported.⁵

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (100-200 mg/ml), yielding a clear, colorless solution. The dissolution of sodium hydroxide in water is a highly exothermic (heat-producing) process.

Storage/Stability

Sodium hydroxide stock solutions should be stored in plastic containers. Glass containers should be completely avoided in the preparation and storage of sodium hydroxide solutions.

For volumetric NaOH solutions, it is necessary to protect them from air to avoid formation of carbonate in solution.¹ A titration procedure for sodium hydroxide that contains contaminating sodium carbonate has been published.⁶

References

1. The Merck Index, 12th ed., Entry# 8772.
2. Maxam, A. M., and Gilbert, W., Sequencing end-labeled DNA with base-specific chemical cleavages. *Methods Enzymol.*, **65(1)**, 499-560 (1980).
3. *Molecular Cloning: A Laboratory Manual*, 3rd ed., Sambrook, J., and Russell, D.W., CSHL Press (Cold Spring Harbor, NY: 2001), pp. 12.60-12.65, 12.70-12.71.
4. Ingelbrecht, I. L., et al., Highly sensitive northern hybridization using a rapid protocol for downward alkaline blotting of RNA. *Biotechniques*, **25(3)**, 420-423, 425-426 (1998).
5. Carricajo, A., et al., Evaluation of BacT/Alert 3D liquid culture system for recovery of mycobacteria from clinical specimens using sodium dodecyl (lauryl) sulfate-NaOH decontamination. *J. Clin. Microbiol.*, **39(10)**, 3799-3800 (2001).
6. Michalowski, T., Titration of monoprotic acids with sodium hydroxide contaminated by sodium carbonate. *J. Chem. Educ.*, **65**, 181 (1988).

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