



Product Information

Methanol

Product Number **M 3641**
Store at Room Temperature

Product Description

Molecular Formula: CH₃OH
Molecular Weight: 32.04
CAS Number: 67-56-1
Density: 0.7915 g/mL (20 °C)¹
Boiling point: 64.7 °C (760 torr)¹
Synonyms: methyl alcohol, methyl carbinol¹

This product is designated as Spectrophotometric Grade. It has been tested according to the American Chemical Society (ACS) specifications for absorbance.

Methanol is a widely used polar organic solvent in chemistry, biochemistry and molecular biology research. It is a common solvent in HPLC and mass spectrometry (MS) of small molecules and of biomolecules such as oligonucleotides and proteins.^{2,3,4,5} Methanol is also utilized in high performance capillary electrophoresis.⁶ Protocols which utilize methanol have been published on the isolation of hydrophobic and membrane proteins from macrophages, plants, and bile.^{7,8,9} The use of methanol in studies of sequencing gels has been described.¹⁰

Applications of methanol include the manufacture of formaldehyde and of methyl esters of organic and inorganic acids. Methanol is used as a solvent and solvent adjuvant for polymers, and as a softening agent for pyroxylin plastics.¹

Precautions and Disclaimer

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

Preparation Instructions

This product is miscible with water, ethanol, ether, benzene, and most other organic solvents.¹

References

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3. Fountain, K. J., et al., Analysis of native and chemically modified oligonucleotides by tandem ion-pair reversed-phase high-performance liquid chromatography/electrospray ionization mass spectrometry. *Rapid Commun. Mass Spectrom.*, **17(7)**, 646-653 (2003).
4. High-Performance Liquid Chromatography of Peptides and Proteins: Separation, Analysis, and Conformation. Mant, C. T., and Hodges, R. S., eds., CRC Press (Boca Raton, FL: 1991), pp. 292, 310, 442, 644.
5. Piette, V., et al., Enantiomer separation of N-protected amino acids by non-aqueous capillary electrophoresis and high-performance liquid chromatography with tert-butyl carbamoylated quinine in either the background electrolyte or the stationary phase. *J. Chromatogr. A.*, **987(1-2)**, 421-427 (2003).
6. High Performance Capillary Electrophoresis: Theory, Techniques, and Applications. Khaledi, M. G., ed., John Wiley & Sons (New York, NY: 1998), pp. 527, 529-531, 536, 539, 541, 546-550, 571.
7. Simoes-Barbosa, A., et al., Solubilization of delipidated macrophage membrane proteins for analysis by two-dimensional electrophoresis. *Electrophoresis*, **21(3)**, 641-644 (2000).
8. Seigneurin-Berny, D., et al., Technical Advance: Differential extraction of hydrophobic proteins from chloroplast envelope membranes: a subcellular-specific proteomic approach to identify rare intrinsic membrane proteins. *Plant J.*, **19(2)**, 217-228 (1999).

9. Stark, M., et al., Isolation and characterization of hydrophobic polypeptides in human bile. Eur. J. Biochem., **266(1)**, 209-214 (1999).
10. Molecular Cloning: A Laboratory Manual, 3rd ed., Sambrook, J., and Russell, D. W., CSHL Press (Cold Spring Harbor, NY: 2001), pp. 12.90-12.92, A1.20.

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