

MP Biomedicals, LLC

29525 Fountain Parkway Solon, Ohio 44139

Telephone: 440/337-1200 Toll Free: 800/854-0530 Fax: 440/337-1180 mailto: biotech@mpbio.com web: http://www.mpbio.com

TECHNICAL INFORMATION

Catalog Number: 193814, 194002, 194800 Chloroform

Structure:

CI CI Н ĊL

Molecular Formula: CHCl₃ Molecular Weight: 119.4 CAS # 67-66-3

Density: 1.484 g/ml

Synonyms: Trichloromethane; Methylidyne trichloride

Solubility: Soluble in water (1 ml/200 ml water); miscible with ethanol, benzene, ether, petroleum ether, carbon tetrachloride, carbon disulfide, oils.¹

Stability: Pure chloroform is light sensitive. Protect from light and keep cool. Stabilizers such as ethanol are typically added for stability (typically at a concentration of 0.5 to 1% v/v).¹

Description: Typically used as a solvent for fats, oils, rubber, alkaloids, waxes, gutta-percha, resins; as cleansing agent; in fire extinguishers to lower the freezing temp of carbon tetrachloride.¹ Procedures have been described for the use of chloroform in lambda plaques storage, lambda cDNA storage, the removal of mineral oil from PCR reaction samples, oligonucleotide purification, a hydroxyl radical footprinting protocol, a transcriptional run-on assay protocol, and an overlay assay for beta-galactosidase activity.⁶ It has also been used with phenol in such procedures as DNA recovery from polyacrylamide gels, ethidium bromide removal from DNA preparations, lysis protocols for plasmid DNA isolation, RNase removal, and purification of yeast DNA.⁶ A protocol describes the use of chloroform in a high-performance thin-layer chromatography protocol for sphingomyelin analysis.⁵ Chloroform can also be used in chloroform/methanol mixtures for the isolation of cardiolipids from *Geobacillus stearothermophilus* and their subsequent MS analysis.² The isolation of the bacteriocin amylovorin L471 from *Lactobacillus amylovorus* DCE 471 in culture broth has been reported, using chloroform/methanol extraction and precipitation in the procedure.³ Chloroform/2-butanol mixtures can be used for the extraction of steroid sulfates for analysis by nanoelectrospray ionization mass spectrometry.⁴

Availability:

Catalog Number	Description	Size
194800	Chloroform, molecular biology reagent, used for PCR aqueous phase recovery overlaid with mineral oil. Each vial contains 1.5 ml	1 vial 5 vials
194002	Chloroform, molecular biology reagent	25 ml 100 ml 500 ml 1000 ml
193814	Chloroform, ACS Reagent Grade, Spectro Grade	100 ml 500 ml 1 liter

Also Available

Catalog Number	Description	Size
	TMS, purity: 99.8% D atom, density = 1.50 g/ml	1 g 10 g 50 g 100 g

atom, density = 1.50 g/ml	1 g 10 g 50 g 100 g
atom, density = 1.50 g/ml	0.5 ml 5 ml 10 ml

References:

- Merck Index, 12th Ed., No. 2193.

- Beckedorf, A.I., et al., "Mapping and sequencing of cardiolipins from *Geobacillus stearothermophilus* NRS 2004/3a by positive and negative ion nonoESI-QTOF-MS and MS/MS." *J. Mass. Spectrom.*, v. 37(10), 1086-1094 (2002).

- Callewaert, R., et al., "Characterization and production of amylovorin L471, a bacteriocin purified from *Lactobacillus amylovorus* CDE 471 by a novel three-step method." *Microbiology*, v. 145(Pt 9), 2559-2568 (1999).

- Chatman, K., et al., "Nanoelectrospray mass spectrometry and precursor ion monitoring for quantitative steroid analysis and attomole sensitivity." *Anal. Chem.*, v. 71(13), 2358-2363 (1999).

- Ramstedt, B., et al., "Analysis of natural and synthetic sphingomyelins using high-performance thin-layer chromatography." *Eur. J. Biochem.*, v. 266(3), 997-1002 (1999).

Sambrook, J. and Russell, D.W. (eds.), *Molecular Cloning: A Laboratory Manual, 3rd ed.*, Cold Spring Harbor Press, NY, pp. 1.34, 1.37, 1.42, 1.46, 1.57, 1.64, 1.74, 1.77, 2.32-2.33, 2.36, 4.68-4.69, 5.53, 8.22, 9.33, 10.27, 17.12, 18.28 (2001).
Turk, J.A. and Smithrud, D.B., "Synthesis and physical properties of protein core mimetrics." *J. Org. Chem.*, v. 66(25), 8328-8335 (2001).

- van Manen, H.J., et al., "Convergent synthesis of noncovalent metallodendrimers containing hydrophobic dendrons at the periphery." *J. Org. Chem.*, v. 66(13), 4643-4650 (2001).