

# DMSO (dimethylsulfoxide), anhydrous

Catalog no. D12345

Table 1 Contents and storage

Material	Amount	Storage*
DMSO (dimethylsulfoxide), anhydrous	10 × 3 mL	<ul style="list-style-type: none"> <li>• Room temperature</li> <li>• Desiccate</li> <li>• Protect from light</li> </ul>

\* DMSO stock solutions freeze at refrigerator temperatures; if frozen, allow the stock solution to fully thaw before use.

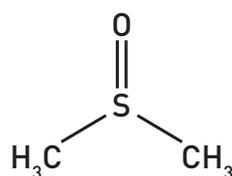
## Introduction

Dimethyl sulfoxide, or DMSO, is a highly polar organic solvent that is miscible with water in all proportions. It is used to solubilize compounds, including biomolecules, that are generally insoluble in aqueous environments. With a polar sulfoxide moiety and two nonpolar methyl groups, DMSO is known to penetrate cell membranes, and it can facilitate the transport of hydrophobic molecules, including many fluorophores, across cell membranes when they would otherwise be impermeable. DMSO at a concentration of 5–10% (v/v) is also used as an additive in PCR mixes to inhibit secondary structure formation.

Molecular Probes® DMSO is suitable for preparing stock solutions of many reagents, including amine-reactive probes (e.g., SE- or TFP-reactive esters), thiol-reactive probes (e.g., maleimides), acetoxymethyl (AM) or acetate esters, chemical crosslinkers (e.g., SMCC), nucleic acid-binding probes, and subcellular structure probes (e.g., MitoTracker® and LysoTracker® reagents). The recommended concentrations of these stock solutions are typically between 1–10 mM. Refer to the protocols supplied with the individual products for detailed instructions on preparing stock solutions.

**Note:** DMSO is a common component of cryopreservation media; however, this product is intended for dye solvent use, and we have no guidelines on using it for cryopreservation. See Cat. nos 12648010, A1254201, and A1371301 for cryopreservation media.

Figure 1 Structure and properties of DMSO\*



Molecular weight = 78.13  
Density = 1.10 g/mL  
Melting point = 18.4°C

\* from CRC Handbook of Chemistry & Physics, 71st edition (1990-1991), ed. David R. Lide.

# Purchaser Notification

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