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## DATASHEET

DMSO (Sterile-filtered)

### Product overview

<b>Name</b>	DMSO (Sterile-filtered)
<b>Cat No</b>	HB3262
<b>Alternative names</b>	Methyl sulfoxide, Dimethyl Sulfoxide
<b>Purity</b>	>99.9%
<b>Description</b>	Widely used solvent. Improves direct differentiation of pluripotent stem cells and used as a stem cell cryoprotectant

### Biological Data

<b>Biological description</b>	Organic solvent widely used for dissolving lipophilic substances.  Commonly used as a cryotectant in cryopreservation of stem cells.  DMSO activates the retinoblastoma (Rb) protein and increases the proportion of cells in the early G1 phase of the cell cycle.  DMSO improves directed differentiation of many cell lines. DMSO increases the competency of pluripotent stem cells (in >25 different embryonic and induced pluripotent stem cell lines) to respond to differentiation signals, enhance differentiation across all germ layers and improve terminal differentiation into functional derivatives  Endotoxin < 0.05 I.E(EU)/mL
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### Solubility & Handling

<b>Storage instructions</b>	Room temperature (desiccate)
<b>Handling</b>	This compound is light sensitive. We therefore recommend protecting the compound and solutions from light.
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	Dimethyl sulfoxide
<b>Molecular Weight</b>	78.13
<b>Chemical structure</b>	The chemical structure of Dimethyl sulfoxide (DMSO) is shown within a square frame. It consists of a central sulfur atom (S) double-bonded to an oxygen atom (O) above it, and single-bonded to two methyl groups (represented by lines) extending downwards and outwards.

<b>Molecular Formula</b>	C <sub>2</sub> H <sub>6</sub> OS
<b>CAS Number</b>	67-68-5
<b>PubChem identifier</b>	679

<b>SMILES</b>	CS(=O)C
<b>InChi</b>	InChI=1S/C2H6OS/c1-4(2)3/h1-2H3
<b>InChiKey</b>	IAZDPXIOMUYVGZ-UHFFFAOYSA-N
<b>MDL number</b>	MFCD00002089
<b>Appearance</b>	colourless liquid

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## References

### **Cryopreservation of hematopoietic stem cells.**

Berz et al (2007) Am J Hematol 82(6):

**PubMedID** [17266054](#)

### **A simple tool to improve pluripotent stem cell differentiation.**

Chetty et al (2013) Nat Methods 10(6)

**PubMedID** [23584186](#)

### **A cost-effective system for differentiation of intestinal epithelium from human induced pluripotent stem cells.**

Ogaki et al (2015) Sci Rep 30

**PubMedID** [26616277](#)

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