

**DTT Solution (1M)
(Catalog# TBS5039)****Description**

Dithiothreitol (DTT) is used in proteomics applications to maintain sulfhydryl (-SH) groups in the reduced state and for quantitative reduction of disulfide (-S-S-) groups. By reducing the disulfide bonds in a protein sample, the protein can be more effectively fragmented and analyzed.

DTT is a commonly used reagent in buffers because of its ability to reduce oxidation of a protein sample, and thereby, preserve enzymatic activity. DTT is oxidized to the cyclic disulfide during the reduction of other disulfides in solution. Disulfide reduction is typically complete in minutes at pH 8. Its usefulness stems from its water solubility, reduced odor, and lower toxicity compared to other thiol compounds (2-mercaptoethanol).

Storage: Supplied as 1M DTT Solution, 50 mL.
Store at -20°C.

Note: For optimal storage, aliquot buffer into small quantities after centrifugation and store at recommended temperature.

This product is for *in vitro* research use only and is not intended for use in humans or animals.

This product is not intended for use as a therapeutic or in diagnostic procedures.

Free of detectable DNase/RNase/human DNA.

Free of detectable endotoxins (pyrogens).

Sterility

The product was passed a 0.22 micron filter.

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RELATED PRODUCTS:

PBS-1x (catalog# TBS5003)
PBS-10x (catalog# TBS5004)
BSA Standard solution (catalog# TBS5002)
Protein Assay kit (catalog# TBS2005)
RIPA Buffer (catalog# TBS5017)
TBE-10x (catalog# TBS5007)
DNA Loading Buffer (catalog# TBS5018)
Protein Loading Buffer (catalog# TBS5014)
TAE-10x (catalog# TBS5006)

Material Safety Data Sheet (MSDS)**Identification:****Product name:** Dithiothreitol Solution (1M)**Product Catalog:** TBS5039**Manufacturer Supplier:**

4062 Fabian Way, Suite 1, Palo Alto,

CA 94303 USA

1-650-917-9269 TEL

1-650-618-5498 FAX

Composition/Information on Ingredients:**This product is For Research Use Only.**

Ingredient Name	CAS#	Percent
Dithiothreitol DTT	3483-12-3	15.4%

Hazard Identification:**CAUTION:** This product is not for use in humans. It is intended for research purposes only. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.**Emergency Overview:****OSHA Hazards:** Target Organ Effect, Harmful by Ingestion, Toxic by skin absorption, Irritant.**Target Organs:** Lungs**Potential Health Effects:****Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.**Eye Contact:** Causes eye irritation. Risk of damage to eyes.**Skin Contact:** May be harmful if absorbed through skin. Causes skin irritation.**Ingestion:** Harmful if swallowed.**First Aid Measures for hazardous ingredient:**

Dithiothreitol Solution:

Inhalation: Remove to fresh air. If breathing is difficult, get medical attention.**Ingestion: DO NOT INDUCE VOMITING.** If person is conscious, wash out mouth with water. Get medical attention.**Skin contact:** Wash skin with soap or mild detergent and water for at least 15 minutes. If irritation develops or persists, get medical attention.**Eye contact:** Immediately flush eyes water for at least 15 minutes. Get medical attention.**Accidental Release Measures:**

Wear appropriate personal protective equipment as indicated. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

Handling and Storage:

Store at room temperature in tightly closed container. Avoid inhalation of vapor or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

Exposure Controls/Personal**Ventilation System:** a system of local (fume hood) and general exhaust is recommended.**Skin Protection:** wear compatible chemical resistant gloves and protective clothing.**Eye protection:** wear chemical safety goggles.

Maintain emergency eyewash and shower in work area.

Physical and Chemical Properties**Appearance:** colorless liquid**Odor:** data not available**pH:** data not available**Boiling Point:** data not available**Melting or Freezing Point:** data not available**Flash Point:** data not available**Volatile Organic Compounds:** data not available**Autoignition temp:** data not available**Solubility (water):** Soluble in water**Toxicological Information:****Acute toxicity:** data not available**Chronic exposure:** data not available**Potential Health Effects:****Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.**Skin:** May be harmful if absorbed through skin. Causes skin irritation.**Eyes:** Causes eye irritation.**Ingestion:** Harmful if swallowed.**Disposal Considerations:**

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Other Information:

This product is for research use only and is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Tribioscience, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.