

Certificate of Analysis

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Product Name: DL-Dithiothreitol

Catalog No.: 3154

Batch No.: 11

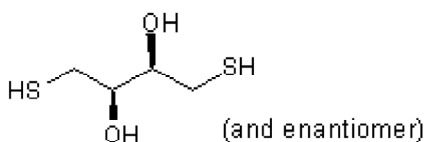
CAS Number: 3483-12-3

EC Number: 222-468-7

IUPAC Name: *threo*-1,4-Dimercapto-2,3-butanediol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄H₁₀O₂S₂
Batch Molecular Weight: 154.25
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	31.15	6.53	0
Found	31.29	6.52	0

Purity (Titration): 101.0 %

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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CAS Number: 3483-12-3

EC Number: 222-468-7

IUPAC Name: *threo*-1,4-Dimercapto-2,3-butanediol

Description:

DL-Dithiothreitol is a reagent for maintaining SH groups in the reduced state.

Physical and Chemical Properties:

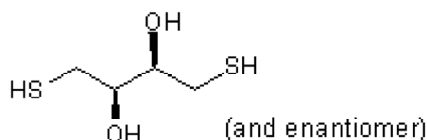
Batch Molecular Formula: C₄H₁₀O₂S₂

Batch Molecular Weight: 154.25

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Jabusch *et al* (1978) The effect of thiodiglycol and dithiothreitol on the alkaline hydrolysis products of certain amino acid phenylthiohydantoin. *Anal.Biochem.* **91** 532. PMID: 9762140.

Rüegg and Rudinger (1977) Reductive cleavage of cystine disulfides with tributylphosphine. *Methods Enzymol.* **47** 111. PMID: 927167.

Sears *et al* (1977) Relative susceptibilities of the interchain disulfides of an immunoglobulin G molecule to reduction by dithiothreitol. *Biochemistry* **16** 2031. PMID: 403938.

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