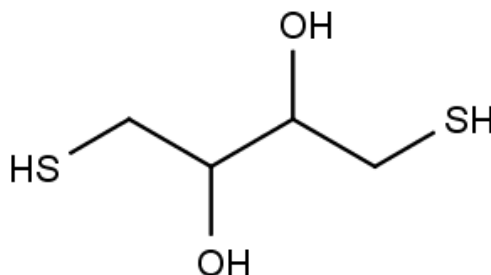


Dithiothreitol (DTT)

Catalog No: 04010
Lot No: XXXXX
Cas No: 3483-12-3
Formula: C₄H₁₀O₂S₂
MW: 154.25
Supplied as: solid
Stability: store at +4°C



Background

DTT is an unusually strong reducing agent, because once oxidized, it forms a stable six-membered ring with an internal disulfide bond. The reduction usually does not stop at the mixed-disulfide species because the second thiol of DTT has a high propensity to close the ring, forming oxidized DTT and leaving behind a reduced disulfide bond. The reducing power of DTT is limited to pH values above 7, since only the negatively charged thiolate form -S⁻ is reactive (the protonated thiol form -SH is not); the pKa of the thiol groups is 9.2 and 10.1.

Tests

Appearance:

10% solution in water:

Melting point:

I.R.:

Titration ex -SH (iodometric):

T.L.C.:

UV assay (1% solution)

A₂₈₀

A₃₀₅

UV assay (0.02 M solution)

A₂₈₃

UV assay (1% solution)

A₄₀₀

A₄₀₅

OD 700 - 500 nm:

Loss on drying:

% oxidized DTT:

Specifications

white crystals

clear and colorless

42±2°C (Corr.)

consistent with assigned structure

≥99.0%

one spot

<0.067

<0.050

<0.040

<0.062

<0.062

≤0.035

<0.50%

<0.50%

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.

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