



>>>Entry Name: **2,2'-Dithiobisethanesulfonic acid**, 9CI

Synonym(s): 2,2'-Dithiodiethanesulfonic acid, 8CI. Diethyl disulfide-2,2'-disulfonic acid. 3,4-Dithia-1,6-hexanedisulfonic acid

CAS Registry Number: 45127-11-5

Type of Compound Code(s): VA0300 XA4980 XA5150

HO₃SCH₂CH₂SSCH₂CH₂SO₃H

Molecular Formula: C₄H₁₀O₆S₄

Molecular Weight: 282.383

Accurate Mass: 281.93602

Percentage Composition: C 17.01%; H 3.57%; O 34.00%; S 45.42%

Use/Importance: Bacterial cofactor. Disulfide related to 2-Mercaptoethanesulfonic acid [DLK86-F](#)

Calculated Log P Data: Log P -1.06 (uncertain value) (calc)

>>>Derivative: Di-Na salt

Synonym(s): **Dimesna**, INN. Mesna disulfide

CAS Registry Number: 16208-51-8

Molecular Formula: C₄H₈Na₂O₆S₄

Molecular Weight: 326.347

Accurate Mass: 325.899904

Percentage Composition: C 14.72%; H 2.47%; Na 14.09%; O 29.42%; S 39.30%

Source/Synthesis: Metab. of Mesna

Use/Importance: Mucolytic agent. Used to alleviate toxic side effects of antitumour drugs

Melting Point: Mp 273 dec.°

>>>Derivative: S-Benzylthiouronium salt

Melting Point: Mp 97°

>>>Derivative: Dichloride

Molecular Formula: C₄H₈Cl₂O₄S₄

Molecular Weight: 319.274

Accurate Mass: 317.868244

Percentage Composition: C 15.05%; H 2.53%; Cl 22.21%; O 20.04%; S 40.17%

Melting Point: Mp 68-72°

>>>Derivative: Diamide

Molecular Formula: C₄H₁₂N₂O₄S₄

Molecular Weight: 280.414

Accurate Mass: 279.967988

Percentage Composition: C 17.13%; H 4.31%; N 9.99%; O 22.82%; S 45.74%

Melting Point: Mp 146-151°

References:

Lemaire, H. *et al.*, *J.O.C.*, 1961, **26**, 1330, (*synth*)

Fedoseeva, V.N. *et al.*, *Ukr. Khim. Zh. (Russ. edn.)*, 1967, **33**, 596; *CA*, **67**, 90729e, (*synth*)