



>>Entry Name: **Thiomolybdate (MoS₄²⁽⁻⁾)**

Synonym(s): Tetrathioxomolybdate(2-), 10Cl. Tetrasulfidomolybdate(*VI*)

CAS Registry Number: 16330-92-0

Related CAS Registry Numbers(s): 13718-35-9 13818-85-4 14348-08-4 14348-10-8 14986-99-3 15060-35-2 77815-82-8
[MoS₄]²⁽⁻⁾

Molecular Formula: MoS₄²⁽⁻⁾

Molecular Weight: 224.204

Accurate Mass: 225.793686

Percentage Composition: Mo 42.79%; S 57.21%

>>Derivative: Di-Na salt

CAS Registry Number: 18198-15-7

Molecular Formula: MoNa₂S₄

Molecular Weight: 270.183

Accurate Mass: 271.77322

Percentage Composition: Mo 35.51%; Na 17.02%; S 47.47%

Physical Description: Dark red cryst.

>>Derivative: Di-NH₄ salt

Synonym(s): Ammonium tetrathiomolybdate

CAS Registry Number: 15060-55-6

Molecular Formula: H₈MoN₂S₄

Molecular Weight: 260.281

Accurate Mass: 261.862434

Percentage Composition: H 3.10%; Mo 36.86%; N 10.76%; S 49.28%

Source/Synthesis: Prepd. by passing H₂S gas through molybdate solns. in conc. NH₄OH

Use/Importance: Decoppering agent *in vivo*. Used for the treatment of Wilson's disease

Physical Description: Red cryst.

Melting Point: Mp 100 dec.°

Solubility: V. sol. H₂O

Aldrich: 32344-6

>>Derivative: Bis-Et₄N salt

CAS Registry Number: 14348-09-5

Physical Description: Cryst. (MeCN)

>>Derivative: Bis-benzyltriethylammonium salt

CAS Registry Number: 146785-42-4

Source/Synthesis: Synth. by metathesis of NH₄ salt in H₂O with PhCH₂Et₃NCl

Use/Importance: Selectively deprotects 2-propynyl esters in the presence of other esters; sulfur transfer agent, mediates in the reductive dimerisation of alkyl azides and the reductive coupling of alkyl selenocyanates to give dialkyl diselenides; selectively deprotects 2-propynyl ethers; mediates in the reductive cyclisation of ω-azidocarbonyl compds.

Physical Description: Dark red cryst.

Melting Point: Mp 150 dec.°

Solubility: Sol. CHCl₃, CH₂Cl₂

Aldrich: 44113-9

References: