



>>Entry Name: Manganese(II) sulfate (MnSO₄), 11CI

ENTRY UNDER REVIEW

Synonym(s): Manganese sulfate, USAN

CAS Registry Number: 7785-87-7

Extra CAS Registry Numbers(s): 10124-55-7 15244-36-7

MnSO₄

Molecular Formula: MnO₄S

Molecular Weight: 151.002

Accurate Mass: 150.889777

Percentage Composition: Mn 36.38%; O 42.38%; S 21.24%

Source/Synthesis: Synth. by heating a hydrated salt above 200°

Use/Importance: Important in extraction of Mn from ores. Forms a number of complexes with NH₃, N₂H₄, urea; and double sulfates with Na, K, NH₄, Al^{III}, Fe^{III}, Cr^{III}. Dietary mineral supplement

Physical Description: Pale pink cryst. thermally v. stable. Dec. above 700° to form SO₂, SO₃ and Mn oxides

Melting Point: Mp 710 ° (at 4850 atm.)

Solubility: Sol. H₂O; sl. sol. MeOH, EtOH

Other Data: Other phases exist at high temps. and press. $\mu_{\text{eff}} = 5.7\mu_{\text{B}}$ (77-600K)

>>Derivative: Dihydrate

CAS Registry Number: 13465-25-3

Source/Synthesis: Synth. by shaking a satd. soln. of the heptahydrate at 36° for 150 h

Physical Description: Pink cryst.

Other Data: Not v. stable

>>Derivative: Tetrahydrate

CAS Registry Number: 10101-68-5

Source/Synthesis: Synth. by crystallising a conc. soln. of MnSO₄ containing EtOH at 95°

Physical Description: Pink cryst.

Other Data: Monoclinic struct. similar to MgSO₄·4H₂O

>>Derivative: Pentahydrate

CAS Registry Number: 13465-27-5

Source/Synthesis: Synth. by crystallising an aq. satd. soln. between 9-24°

Physical Description: Pink triclinic cryst.

Other Data: $\mu_{\text{eff}} = 5.9\mu_{\text{B}}$

>>Variant: Mineral-form

Synonym(s): Szmikite

CAS Registry Number: 52717-37-0

Molecular Formula: MnO₄S

Molecular Weight: 151.002

Accurate Mass: 150.889777

Percentage Composition: Mn 36.38%; O 42.38%; S 21.24%

Source/Synthesis: Found as an efflorescence in Romania and Japan

Physical Description: Greyish white, brownish white, rose red

>>Derivative: Monohydrate

CAS Registry Number: 10034-96-5

Source/Synthesis: Synth. by heating heptahydrate above 100°. Occurs naturally as the mineral *Szmikite*

Other Data: $\mu_{\text{eff}} = 5.74\mu_{\text{B}}$

Aldrich: 22128-7

Fluka: 63555

Sigma: M1144