



>>Entry Name: Iron(II) selenide

CAS Registry Number: 1310-32-3
FeSe

Molecular Formula: FeSe
Molecular Weight: 134.807
Accurate Mass: 135.851459
Percentage Composition: Fe 41.43%; Se 58.57%

Source/Synthesis: Synth. from Fe + Se
Use/Importance: Source of H₂Se (evolved on treatment with acids). Semiconductor
Physical Description: Air-stable black metallic solid
Solubility: Insol. H₂O; sol. acids

>>Derivative: Fe_{0.75}Se

CAS Registry Number: 12063-40-0

Molecular Formula: Fe₃Se₄
Molecular Weight: 483.381
Accurate Mass: 487.470897
Percentage Composition: Fe 34.66%; Se 65.34%
Other Data: Pseudo-NiAs struct. with ordered vacancies

>>Derivative: Fe_{0.89}Se

Other Data: Possesses NiAs struct. Quenching from 997° gives precipitated β-FeSe with tetragonal PbO struct.

>>Derivative: FeSe₂

References:

Gronvold, W., *Acta Chem. Scand.*, 1959, **13**, 241, (*synth*)
Nouveau Traite de Chimie Minerale, 1967, 791, (*bibl*)
Andersen, A.F. *et al.*, *Acta Chem. Scand.*, 1970, **24**, 2435, (*magnetism, struct*)
Terzieff, P. *et al.*, *Monatsh. Chem.*, 1978, **109**, 1037; 1982, **113**, 519, (*magnetism, thermoelectric props*)