>>**Entry Name: Mercury(*II*) sulfide (HgS)**
Synonym(s): Mercuric sulfide. C.I. Pigment red 106

CAS Registry Number: 1344-48-5

HgS

Molecular Formula: HgS
Molecular Weight: 232.656
Accurate Mass: 233.942687
Percentage Composition: Hg 86.22%; S 13.78%
Biological Use/Importance: Antiseptic
Melting Point: Mp 850°
Boiling Point: Subl. 580°
Other Data: K_{sp} 2 x 10^{-53} (at 20°)

Aldrich: 24356-6
Fluka: 83376

>>**Variant:** Red-form
Synonym(s): α-form. **Cinnabar.** Cinnabarite. Vermilion

CAS Registry Number: 19122-79-3
Molecular Formula: HgS
Molecular Weight: 232.656
Accurate Mass: 233.942687
Percentage Composition: Hg 86.22%; S 13.78%

Source/Synthesis: Synth. from H_2S and $Hg(OAc)_2$ or obt. as mineral. Cinnabar is chief ore of mercury, occurs in low temp. deposits
Physical Description: Bright scarlet red hexagonal cryst.
Solubility: Insol. H_2O; sol. aq. regia
Other Data: α → β trans. occurs at 344°

>>**Variant:** Black-form
Synonym(s): Metacinnabar. Metacinnabarite

Molecular Formula: HgS
Molecular Weight: 232.656
Accurate Mass: 233.942687
Percentage Composition: Hg 86.22%; S 13.78%

Source/Synthesis: Synth. from $HgCl_2$ and H_2S or obt. as rare mineral
Use/Importance: Semiconductor
Physical Description: Amorph. greyish black cryst.
Solubility: Insol. H_2O, EtOH, dil. mineral acids
Other Data: Other forms have been identified at increasing pressures including an NaCl-form (β-form) and a body-centred-tetragonal form

References: