



>>Entry Name: Nickel(II) bromide (NiBr₂)

Synonym(s): Nickel dibromide

CAS Registry Number: 13462-88-9

NiBr₂

Molecular Formula: Br₂Ni

Molecular Weight: 218.498

Accurate Mass: 215.812018

Percentage Composition: Br 73.14%; Ni 26.86%

Source/Synthesis: Synth. from Ni or Ni(CO)₄ + Br₂ or by dehydration of hydrates

Use/Importance: Commercially available as NiBr₂.xH₂O

Physical Description: Yellow cryst.

Melting Point: Mp 963°

Solubility: Sol. H₂O; sl. sol. MeOH, EtOH, Me₂CO, Et₂O

Other Data: Paramagnetic

Aldrich: 44915-6

Fluka: 72246

>>Derivative: Dihydrate

CAS Registry Number: 13596-19-5

Molecular Formula: Br₂H₄NiO₂

Molecular Weight: 254.528

Accurate Mass: 251.833148

Percentage Composition: Br 62.79%; H 1.58%; Ni 23.06%; O 12.57%

>>Derivative: Trihydrate

CAS Registry Number: 7789-49-3

Molecular Formula: Br₂H₆NiO₃

Molecular Weight: 272.544

Accurate Mass: 269.843713

Percentage Composition: Br 58.64%; H 2.22%; Ni 21.53%; O 17.61%

Physical Description: Yellow-green deliquescent needles

Solubility: Sol. H₂O, EtOH, Et₂O

Other Data: Loses 3H₂O at 300°

>>Derivative: Hexahydrate

Synonym(s): Hexaaquanickel(II) dibromide

CAS Registry Number: 18721-96-5

Molecular Formula: Br₂H₁₂NiO₆

Molecular Weight: 326.589

Accurate Mass: 323.875408

Percentage Composition: Br 48.93%; H 3.70%; Ni 17.97%; O 29.39%

Other Data: Probably bromide salt of Hexaaquanickel(II)(2+) [JWL44-J](#)

>>Derivative: Nonahydrate

Other Data: Probably bromide salt of Hexaaquanickel(II)(2+) [JWL44-J](#) with 3H₂O of crystallisation

References:

Sidgwick, N.V., *The Chemical Elements and their Compds.*, Oxford, 1950, 1433

Remy, H., *Treatise Inorg. Chem.*, Elsevier, 1956, **2**, 314

Fieser and Fieser's *Reagents for Organic Synthesis*, Wiley, 1974, **4**, 351

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1687, (*synth*)