



>>Entry Name: Cobalt(II) iodide (CoI<sub>2</sub>), 8Cl

Synonym(s): Cobalt diiodide. Cobaltous iodide

CAS Registry Number: 15238-00-3

Extra CAS Registry Numbers(s): 13455-29-3

CoI<sub>2</sub>

Molecular Formula: CoI<sub>2</sub>

Molecular Weight: 312.742

Accurate Mass: 312.742144

Percentage Composition: Co 18.84%; I 81.16%

General Statement: Has CdI<sub>2</sub> struct.

Use/Importance: Commercially available

Melting Point: Mp 515-520°

Solubility: Sol. H<sub>2</sub>O, polar org. solvs.

Other Data: Dec. >540°. Paramagnetic

Aldrich: 34314-5

>>Derivative: Hexahydrate

Synonym(s): Hexaaquacobalt(2+) iodide. Cobalt(II) iodide hexahydrate

Physical Description: Brown-red cryst.

Melting Point: Mp 130°

Solubility: Sol. H<sub>2</sub>O, EtOH

Other Data: Best considered as iodide salt of [Co(OH<sub>2</sub>)<sub>6</sub><sup>2(+)</sup>]

>>Variant: α-form

Molecular Formula: CoI<sub>2</sub>

Molecular Weight: 312.742

Accurate Mass: 312.742144

Percentage Composition: Co 18.84%; I 81.16%

Physical Description: Hygroscopic black cryst; pink in soln.

>>Variant: β-form

Molecular Formula: CoI<sub>2</sub>

Molecular Weight: 312.742

Accurate Mass: 312.742144

Percentage Composition: Co 18.84%; I 81.16%

Source/Synthesis: By subl. of α-form at 100° *in vacuo*

Physical Description: Ochre yellow solid. Pale yellow in soln.

#### References:

Sidgwick, N.V., *The Chemical Elements and their Compds.*, Oxford, 1950, 1379, (α,β-forms)

Remy, H., *Treatise Inorg. Chem.*, Elsevier, 1956, **2**, 298

Wells, A.F., *Structural Inorg. Chem.*, 5th Ed., Oxford, 1984, 674, (struct)