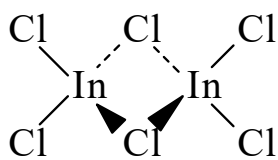




>>Entry Name: Indium(III) chloride

Synonym(s): Indium trichloride



*vapour struct.*

CAS Registry Number: 10025-82-8

Related CAS Registry Numbers(s): 16999-64-7 18251-72-4 50800-85-6

Extra CAS Registry Numbers(s): 22519-64-8

Molecular Formula:  $\text{Cl}_3\text{In}$

Molecular Weight: 221.178

Accurate Mass: 219.810436

Percentage Composition: Cl 48.09%; In 51.91%

Source/Synthesis: Synth. from  $\text{In}_2\text{O}_3$  and  $\text{SOCl}_2$  at  $300^\circ$ , or from  $\text{In} + \text{Cl}_2$

Use/Importance:  $^{113}\text{In}$  compd. used as radioactive agent e.g. for bone marrow scintigraphy (\*Indium chlorides In 113m\*, USAN). Catalyst for imino-Diels Alder reactions to give quinolines

Physical Description: Deliquescent yellow cryst.

Melting Point: Mp  $580^\circ$ . Mp  $586^\circ$  (subl.  $500^\circ$ )

Boiling Point: Subl.  $546^\circ$

Other Data: Many complexes descr.

Hazard & Toxicity: LD<sub>50</sub> (rat, ipr) 2.4 mg/kg. Pulmonary toxicant in rats

Aldrich: 42941-4

Fluka: 57110

>>Derivative: Dimer

Synonym(s): Di- $\mu$ -chlorotetrachlorodiindium(III)

CAS Registry Number: 21563-01-9

Molecular Formula:  $\text{Cl}_6\text{In}_2$

Molecular Weight: 442.356

Accurate Mass: 439.620872

Percentage Composition: Cl 48.09%; In 51.91%

>>Derivative: Trihydrate, tris-dioxan complex

Synonym(s): Indium trichloride trihydrate tris(dioxan). Triaquatrchloroindium tris(dioxan)

Molecular Formula:  $\text{C}_{12}\text{H}_{30}\text{Cl}_3\text{InO}_9$

Molecular Weight: 539.542

Accurate Mass: 537.999421

Percentage Composition: C 26.71%; H 5.60%; Cl 19.71%; In 21.28%; O 26.69%

Physical Description: Hygroscopic white cryst.

Other Data: Struct. contains *fac*- $\text{InCl}_3(\text{OH}_2)_3$  octahedra

>>Derivative: Tris-DMSO complex

CAS Registry Number: 14266-85-4

Molecular Formula:  $\text{C}_6\text{H}_{18}\text{Cl}_3\text{InO}_3\text{S}_3$

Molecular Weight: 455.583

Accurate Mass: 453.852241

Percentage Composition: C 15.82%; H 3.98%; Cl 23.35%; In 25.20%; O 10.54%; S 21.12%

Source/Synthesis: Electrochem. synth. from  $\text{In}$  and  $\text{Cl}_2$  in  $\text{C}_6\text{H}_6/\text{DMSO}$

Physical Description: Non-hygroscopic white cryst.

Solubility: Sol. alcohols, EtOAc,  $\text{MeNO}_2$