



>>Entry Name: Lutetium(III) chloride (LuCl₃)

Synonym(s): Lutetium trichloride

CAS Registry Number: 10099-66-8

LuCl₃

Molecular Formula: Cl₃Lu

Molecular Weight: 281.325

Accurate Mass: 279.847326

Percentage Composition: Cl 37.81%; Lu 62.19%

Physical Description: Hygroscopic white solid

Melting Point: Mp 892°. Mp 905° (925°)

Boiling Point: Bp 1480°

Solubility: Sol. H₂O, EtOH

Aldrich: 45096-0

>>Derivative: Hexahydrate

Synonym(s): Hexaaquadichlorolutetium(1+) chloride

CAS Registry Number: 15230-79-2

Molecular Formula: Cl₃H₁₂LuO₆

Molecular Weight: 389.416

Accurate Mass: 387.910716

Percentage Composition: Cl 27.31%; H 3.11%; Lu 44.93%; O 24.65%

Physical Description: Colourless cryst.

Melting Point: Mp 157° (148-150°)

Solubility: Sol. H₂O, EtOH

Other Data: Formulated as [LuCl₂(OH₂)₆]⁽⁺⁾Cl⁽⁻⁾

Aldrich: 29813-1

>>Derivative: Tris-THF complex

Synonym(s): Trichlorotris(tetrahydrofuran)lutetium

CAS Registry Number: 24614-69-5

Molecular Formula: C₁₂H₂₄Cl₃LuO₃

Molecular Weight: 497.645

Accurate Mass: 496.019871

Percentage Composition: C 28.96%; H 4.86%; Cl 21.37%; Lu 35.16%; O 9.65%

Use/Importance: Enables purification free from oxychloride

Physical Description: Colourless cryst.

Solubility: Sl. sol. THF

References:

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