



>>Entry Name: Lanthanum(III) fluoride (LaF₃)

Synonym(s): Lanthanum trifluoride

CAS Registry Number: 13709-38-1

LaF₃

Molecular Formula: F₃La

Molecular Weight: 195.901

Accurate Mass: 195.901556

Percentage Composition: F 29.09%; La 70.91%

Use/Importance: Material doped with Ce³⁽⁺⁾ may be used as solid state laser with shortest obtainable wavelength in systems of this kind

Physical Description: White solid

Melting Point: Mp 1493° (1490°)

Solubility: Sl. sol. H₂O

Aldrich: 44985-7

Fluka: 61500

>>Variant: Mineral-form

Synonym(s): Fluocerite. Tysonite

Molecular Formula: F₃La

Molecular Weight: 195.901

Accurate Mass: 195.901556

Percentage Composition: F 29.09%; La 70.91%

Source/Synthesis: Of rel. widespread occurrence

Physical Description: Yellow to reddish brown cryst.

References:

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Rast, H.F. *et al.*, *Phys. Rev.*, 1968, **171**, 1051, (*ir*)

Lowndes, R.A. *et al.*, *Phys. Rev.*, 1969, **182**, 513, (*ir*)

Spedding, F.H. *et al.*, *J. Chem. Phys.*, 1971, **54**, 2476

Greis, O. *et al.*, *Z. Anorg. Allg. Chem.*, 1974, **403**, 1

Cheetham, A.K. *et al.*, *Acta Cryst. B*, 1976, **32**, 94, (*nd*)

Cerdeira, F. *et al.*, *Phys. Rev. B*, 1979, **19**, 5413

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Makximov, B. *et al.*, *Acta Cryst. B*, 1985, **41**, 88, (*cryst struct*)

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