



>>Entry Name: Lithium niobium oxide (LiNbO₃)

Synonym(s): Lithium niobate (LiNbO₃)

CAS Registry Number: 12031-63-9

Extra CAS Registry Numbers(s): 11115-95-0

LiNbO₃

Molecular Formula: LiNbO₃

Molecular Weight: 147.846

Accurate Mass: 147.907125

Percentage Composition: Li 4.69%; Nb 62.84%; O 32.47%

Aldrich: 25429-0

>>Variant: Stoichiometric-form

Molecular Formula: LiNbO₃

Molecular Weight: 147.846

Accurate Mass: 147.907125

Percentage Composition: Li 4.69%; Nb 62.84%; O 32.47%

Source/Synthesis: Synth. by heating Li₂CO₃ with Nb₂O₅ or by melting Li₂O and Nb₂O₅

Use/Importance: Widely used in electrooptic devices, acoustic devices, lasers, wave guides, holography

Physical Description: Colourless solid

>>Variant: Li-deficient-form

Molecular Formula: LiNbO₃

Molecular Weight: 147.846

Accurate Mass: 147.907125

Percentage Composition: Li 4.69%; Nb 62.84%; O 32.47%

Melting Point: Mp 1240° (congr.)

References:

Weiss, R.S. *et al.*, *Appl. Phys. A*, 1985, **37**, 191, (*rev, cryst struct*)

Duan, F., *Cryst. Lattice Defects Amorphous Mater.*, 1985, **12**, 229, (*rev, Li-defect form*)

Abrahams, S.C. *et al.*, *Acta Cryst. B*, 1986, **42**, 61, (*synth, cryst struct*)

Shirakawa, T. *et al.*, *Chem. Lett.*, 1993, 897, (*neutron emission*)