

Catalog Number: 150134, 152538, 194010

## Lithium Chloride

### Structure:



**Molecular Formula:** LiCl

**Molecular Weight:** 42.39

**CAS # :** 7447-41-8

**Physical Description:** White powder

**Solubility:** Soluble in water (1 g/ 1.3 ml cold water or 0.8 ml hot water), alcohol, acetone, amyl alcohol, pyridine; the aqueous solution is neutral to slightly alkaline.<sup>1</sup>

**Description:** Used as an electrolyte for low temperature dry battery cells and as an oxidation catalyst. It is a solubilizer for polyamides and cellulose when used with amide solvents, and is a chlorinating agent for steroid substrates.

Lithium chloride has also been utilized in:

- Large scale plasmid DNA isolation without ultracentrifugation.<sup>5</sup>
- Protein extraction and protein crystallization.<sup>2,3,4,7,8</sup>
- Crystallization of other biological structures, including vitamin B12-RNA aptamer and the L-A virus particle.<sup>10,13</sup>
- Inhibits the expression and secretion of insulin-like growth factor-binding protein-1 in H4-II-E cells.<sup>9</sup>
- Used in the synthesis of beta-substituted alpha-amino acid derivatives.<sup>6,11</sup>

### Availability:

Catalog Number	Description	Size
150134	Lithium chloride	100 g
	anhydrous	500 g

		1 kg 10 kg
194010	Lithium chloride, molecular biology reagent	100 g 500 g
152538	Lithium chloride, ACS Reagent Grade	100 g 500 g

#### References:

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10. Naitow, H., et al., "Purification, crystallization, and preliminary X-ray analysis of L-A: a dsRNA yeast virus." *J. Struct. Biol.*, **v. 135(1)**, 1-7 (2001).

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