



>>Entry Name: Lithium carbonate, JAN, USAN

Synonym(s): Carbonic acid dilithium salt, 8Cl. Eskalith. Lithane. Lithobid. Lithonate. Lithotabs. NSC 16895. Camcolit. Priadel. Quilonum retard. Many other names

CAS Registry Number: 554-13-2

Li_2CO_3

Molecular Formula: CLi_2O_3

Molecular Weight: 73.891

Accurate Mass: 74.016751

Percentage Composition: C 16.25%; Li 18.79%; O 64.96%

Source/Synthesis: Prep. by reaction of lithium formate and LiOH at 280°. Also formed by addition of aq. NH_3 and CO_2 to a conc. aq. soln. of LiCl

Use/Importance: Commercially available. Used in treatment of manic depression. Dissolution in acids affords corresp. Li salts. Component of Li_2CO_3 - Na_2CO_3 - K_2CO_3 ternary eutectic used for fuel cell applications

Physical Description: Powder or white monoclinic cryst. Dec. on heating by CO_2 loss

Melting Point: Mp 720°

Solubility: Spar. sol. H_2O (1.5 g per 100 cm^3 at 0°; 0.7 g per 100 cm^3 at 100°); insol. EtOH, Me_2CO

Other Data: ΔH_f° -1216.0 kJ mol⁻¹; ΔG_f° -1132.1 kJ mol⁻¹; S° 90.2 J K⁻¹ mol⁻¹

Hazard & Toxicity: Adverse effects of lithium therapy include gastrointestinal disturbances, polyuria, and effects on the nervous system such as tremor or ataxia.

Leucocytosis is a relatively common side effect

Aldrich: 43155-9

Fluka: 62472

Sigma: L9020

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