

An Overview of Lithium Processing: Technical Considerations

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ABSTRACT

Lithium has become a significant commodity in the production of batteries. The accelerated demand for Lithium has resulted from the rapid adoption of electrical energy storage, in particular from the electric vehicle (EV) market which is poised to further grow over the next few years. This has led to the development of lithium production from a wide range of source mineral types. These include hard rock, clay and brine sources. Each of these processing routes has its own technical challenges.

This paper will cover the major processing routes, highlight operational challenges and key learnings developed at SGS. Comminution, flotation, roasting, calcining, leaching, purification, and crystallization will be covered for the major lithium genesis. This will be highlighted through the use of case studies and laboratory learnings.