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### Leaching Gold Using Oxidation Products of Elemental Sulfur in Ca(OH)<sub>2</sub> Solution Under Oxygen Pressure

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**摘要** A gold leaching process by using in situ oxidation products of added elemental sulfur in Ca(OH)<sub>2</sub> solution was investigated. A gold concentrate containing 45 g/t Au was tested and 85%~87% of gold were leached. The leached gold depends mainly on the initial molar ratio of elemental sulfur to the hydroxyl ion, the consumption of oxygen and the reaction temperature. Adding some surfactants, such as lignosulfonic calcium, at lower concentration increased the leached Au but at higher concentration decreased it. Both of thermodynamic analysis and experimental results show that thiosulfate is the major complexing agent for gold in the process.

**关键词** [gold leaching](#) [elemental sulfur](#) [alkaline solution](#) [oxygen pressure](#) [thiosulfate](#)

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