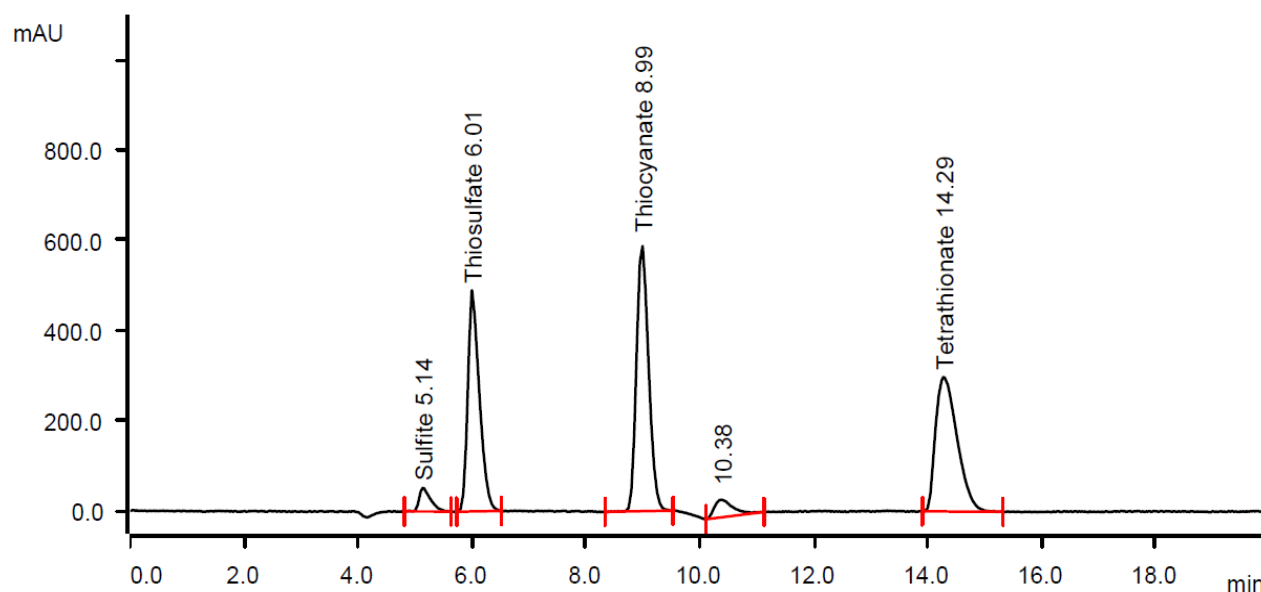


## Sulphur speciation in mining leachates

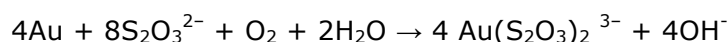
### Enhancing thiosulfate leaching for gold extraction



**With health and safety pressures forcing a move away from cyanide leaching in the gold industry, thiosulfate has become a valuable, if less robust, alternative.**

**The optimization of the leaching solution is key to maximizing recoveries and minimizing waste.**

The thiosulfate leaching process involves a reaction between metallic gold and thiosulfate in an ionic form. Ammonium and copper are consumed as catalysts in the oxidation process as follows:



Thiosulphate leaching is a sensitive process that requires both dependent and independent optimization of each of the chemical components of the leach reaction in order to maximize gold recovery and minimize reagent losses.

Using ion chromatography the ratios of sulfite, thiosulfate, thiocyanate and tetrathionate can be monitored to ensure the optimum process is achieved.

