ABSTRACT

The froth flotation process was used for the upgradation of copper sulphide ore. These concentrates commonly contain precious metals in small amounts like silver and gold. The ammoniacal thiosulfate leaching method was used to convert the metals present in the powdered ore sample obtained through froth flotation process into the solution form due to the production of dissolved metal salts. Atomic absorption spectroscopy was used for analyzing the amounts of copper, silver and gold present in the leach solution. An electroextraction method named electrowinning was used for the extraction of copper and hence copper up to 99.9% was obtained. The anodic sludge obtained by electrowinning process was further processed chemically for the recovery of gold and silver in pure forms. This practical research work aims at the separation of the metals of interest from the indigenous copper ore that are copper, silver and gold.