

ABSTRACT

Ammoniacal thiosulphate extraction of gold finds a better substitute as it is non-toxic and environmentally safe as compared to the toxic cyanide system for gold extraction. In this study an attempt is made to assess the feasibility of ammoniacal thiosulphate extraction of gold appliances samples from different electronics sources. In this study, the effect of thiosulphate concentration, effect of ammonia, effect of cupric ions and few other variables affecting the gold extraction have been studied. The ammoniacal thiosulphate extraction of gold is dependent on ammonia and thiosulphate concentrations. The extraction of gold is improved significantly at a particular ratio of ammonia to thiosulphate concentration. Cupric ions act as an oxidant and the dissolution of gold increases relatively in the presence of them. The gold extraction is minimum in the presence of an inert gas such as nitrogen and the extraction increases in the presence of other gases like oxygen and the air.