

ABSTRACT

This paper reported on the leaching behavior of printed circuit board (PCB) using a new leaching agent of ammonia-ammonium persulfate, to recover copper. Cu and Zn leaching were found to be fast and reached equilibrium in 6h whereas for Ni, prolonged leaching time was needed. The best leaching efficiency was found to be around 99% Cu, 60% Zn and 9% Ni with 5M ammonia, 0.5M ammonium persulfate concentration, which suggested a technological viability of Cu recovery from PCB. Finally the leached solution was subjected for electrowining to recover Cu. The Cu metal with purity of 99.97% was obtained by electrowining.

Keywords: Printed circuit board, Leaching, ammonium persulfate