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Abstract	:	<p>The use of citric acid and hydrogen peroxide solutions for the leaching of silver from electronic waste (e-waste) has become an alternative replacing the strong and harmful acids. The thermodynamic studies of pourbaix and speciation diagrams for silver in citric acid and hydrogen peroxide solutions at various concentrations were developed using Hydra-Medusa software to demonstrate the stability zones of silver(I) ion and silver in the citric acid and hydrogen peroxide solutions. The pourbaix diagram shows that the silver(I) ion species are produced below pH of 10.5 with the potential of 0.6 V in the system containing 5e-5 M silver, 0.5 M citric acid, and 1 M hydrogen peroxide. This study also investigates the efficacy of silver leaching from the computer printed circuit board using the citric acid and hydrogen peroxide solutions and found that the highest silver concentration is 0.939 mg/L with 1.5 M of citric acid, 1.5 M of hydrogen peroxide at 40 oC and at a static condition for 2.5 hours of leaching time. Thermodynamically, silver(I) ion is reduced to form silver at the potential below 0.501 V, where the recovery of silver by electrodeposition can be conducted. This result provides a theoretical basis for the mechanism of silver leaching and the electrodeposition of silver from the citric acid and hydrogen peroxide leachate solutions.</p>