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Effects of soil and pH on leaching behavior of lead from cathode ray tube glass

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In Japan, the television broadcast system will complete the transition from analog to digital broadcasting on July in 2011. It is expected that a large amount of CRT (cathode ray tube) based television will be disposed when it happens. Since the major component of the CRT glass is lead glass, there is concern that the landfill disposal of CRT glass is possible to lead to contaminations of the surrounding soil and ground water. Potential solvents which encounter the storage or disposal CRT glass are from acid (e.g. acid rain) to alkaline (e.g. leachate from cement). Also, CRT glass may be affected by soil coexisted (e.g. adsorption on soil). In this study, the leaching tests for CRT glass with some kind of soil and solvent of pH4 to 12 carried out. The effects of soil and solvent pH on leaching behavior of lead from CRT glass were experimentally examined.

Keywords: CRT, lead glass, leaching test, pH, soil adsorption