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Effect of pH on dissolution behavior of elements 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). In this study, the leaching tests for CRT glass with solvent of pH3 to 12 carried out. Effect of pH on dissolution behavior of elements from CRT glass experimentally examined.

Keywords: CRT, lead glass, leaching test, pH