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Leachability of hexavalent chromium (VI) from building materials.

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PURPOSE OF THE ABSTRACT

Hexavalent chromium was considered harmful for environment due to its toxicity and high solubility. Several materials have been used for immobilization of hexavalent Chromium [1]. In this study, the leachability of hexavalent chromium (IV) have been quantified. Ceramic materials have been used as host matrix to incorporate different loads of hexavalent chromium (VI). Toxicity characteristic leaching procedure was used to evaluate the leachability of chromium and the results was compared to USEPA regulatory standards [2]. Analysis of hexavalent chromium was carried out using the method 7196a proposed by Environmental Agency Protection using a spectrophotometer UV-Vis [3].

FIGURES

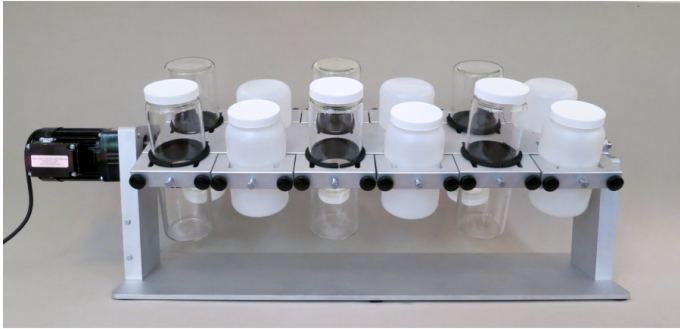


FIGURE 1
TCLP Rotary Extractor
Figure 1

FIGURE 2

KEYWORDS

Leachability | Hexavalent Chromium | Solidification/Stabilization | ceramics

BIBLIOGRAPHY

- [1] 4.LYNCH, G. BRICKS, C. J., Structural Survey, 13, no. 4, 1994, p. 15
- [2] <https://www.epa.gov/hw-sw846/sw-846-test-method-1311-toxicity-characteristic-leaching-procedure>
- [3] <https://www.epa.gov/hw-sw846/sw-846-test-method-7196a-chromium-hexavalent-colorimetric>