



# 7<sup>th</sup> INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS”

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## Removal of Lead (Pb) by the Rhizofiltration Technique Using *Thitonia diversifolia* (Hemsl) A. Gray (False Sunflower) Plants

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### Abstract

Waters contamination by heavy metals represents a environmental problem due to its high toxicity for both humans and the environment. Heavy metals tend to accumulate because of their resistance to degradation. The vegetable species *Thitonia diversifolia* (Hemsl.) A. Gray, was used for the removal the lead (Pb) in a synthetic solution using the rhizofiltration technique in two different germination ages 2 and 4 months with three different concentrations of the heavy metal 20, 15 and 10 mg / L.

The *Thitonia diversifolia* species proved to be efficient in the removal of lead with greater than 90% for the two germination ages evaluated. The highest amount of lead was concentrated in the roots. This becausenthe False sunflower belongs to the dicotyledonous class and according to bibliographic review these accumulate significantly high amounts of lead in the roots.

**Keywords:** *rhizofiltration, lead, tithonia diversifolia, removal.*

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