



“Gheorghe Asachi” Technical University of Iasi, Romania



PREPARATION OF *Moringa oleifera* SEEDS AS COAGULANT IN WATER TREATMENT

**Karina Cardoso Valverde^{1*}, Priscila Ferri Coldebella¹,
Angélica Marquetotti Salcedo Vieira², Leticia Nishi¹, Milene Carvalho Bongiovani¹,
Aline Takaoka Alves Baptista², Márcia Regina Fagundes-Klen³,
Onélia Aparecida Andreo dos Santos¹, Rosângela Bergamasco¹**

¹Engineering Chemical Department, State University of Maringá, Av. Colombo 5790,
Block D-90, 87020-900, Maringá, Paraná, Brazil

²Engineering Food Department, State University of Maringá, Maringá, Paraná, Brazil

³Engineering Chemical Department, State University of West Paraná, Toledo, Paraná, Brazil

Abstract

The influence of the active compound of *Moringa oleifera* Lam (MO) seeds was evaluated by different methods for the preparation of the natural coagulant in the treatment of surface water. Nine methods were analyzed, comprising samples of seed powder with different granulometry, aqueous and saline solutions, evaluated before and after oil extraction from MO seeds. Tests of coagulation/flocculation and sedimentation were accomplished using simple Jar Test. Natural coagulant dose of 50 mg·L⁻¹ identified the best preparation methods in terms of removal efficiency of the quality parameters. Doses of whole powder coagulant, whole and defatted solution (saline) in concentrations between 10 mg·L⁻¹ and 200 mg·L⁻¹ were then added for the treatment of water turbidity to 70 NTU. The whole powder coagulant constituted a good preparation of the natural coagulant with a high potentiality for the treatment of water and may be used by populations in developing countries in which facilities for the treatment of drinking water are lacking.

Key words: *Moringa oleifera* seed preparations, natural coagulant, water treatment

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*Author to whom all correspondence should be addressed: e-mail: karinacvalverde@gmail.com