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Fluid structures used for wastewaters treatment with complex load

Daniela Cadar¹, Nicoleta Liliana Olteanu¹, Elena Adina Andrei¹, Aurelia Meghea¹,
Adina Roxana Petcu^{1,*}, Maria Mihaly^{2,*}

¹University POLITEHNICA of Bucharest, Research Centre for Environmental Protection and Eco-friendly Technologies, Polizu 1, RO-011061, Bucharest, ROMANIA, tel/fax: +40213154193

²University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Inorganic Chemistry, Physical Chemistry and Electrochemistry Department, Polizu 1, RO-011061, Bucharest, ROMANIA, tel/fax: +40213154193

*Corresponding author: tel/fax: 0040213154193, maria.mihaly@upb.ro (Maria Mihaly) and adyna.petcu@yahoo.com (Adina Roxana Petcu)

ABSTRACT

The treatment of wastewaters with complex load including dyes and heavy metals is a subject of paramount importance since trace amounts of these compounds lead to an enormous pollution problem. The present research proposes an innovative, fast and efficient microemulsion system for simultaneous extraction of a mixture of dyes (Crystal violet and Rhodamine B) and heavy metals (cobalt(II) and copper(II) ions) from such wastewaters. The used microemulsion is an environmental friendly system containing Brij 30 as nonionic surfactant and butyl acetate as organic phase. The effect of various parameters with significant influence on the dye and metals extraction efficiencies has been investigated in order to find out the optimal compositions for an efficient extraction of dyes – heavy metals mixture from aqueous

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