

## NANOPARTICLES APPLICATION IN WASTEWATER TREATMENT BY FLOTATION

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The presence of oil and petroleum products in municipal and industrial wastewater effluents are monitored because could cause serious health and environmental problems. For example, in the wastewater resulting from petroleum plants the discharge limits of these substances are regulated at a daily maximum of 42 mg L<sup>-1</sup> and monthly average of 29 mg L<sup>-1</sup> [1]. Nanotechnologies are considered at the moment "emerging technologies" which can revolutionize a huge number of application areas.

In the field of wastewater treatment, as regarding the flotation, nanoparticles may be used as surfactant molecules during wastewater treatment by flotation, being incorporated into surfactant-stabilised foams [2-4]. The studies found in the scientific literature presented the ability of nanoparticles to act as foams/emulsion stabilisers [6,7]. The formation and the stability of foams are dependent of the particles size, surfactant type and concentration [8-10].

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