

Activity Test for Biological Sulfate Reduction

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Biofilm reactors with turbulent agitation are often the best choice for sulfate reduction using hydrogen as electron donor for treatment of metal sulfate wastewater. In this paper, a simple activity set-up with self aspiration of gas into liquid is described for determining the sulphidogenic activity of biofilms on polystyrene beads. Sulfate reducing bacteria attached to the beads of size 1-2 mm and 2 mm were found helpful for 0.058 g SO₄²⁻ reduction per g of dry beads per day and 0.33 g SO₄²⁻ reduction per g of dry beads respectively. Also it is observed that zinc has no impact on this activity at the concentration of 680 mg/L.

Key words : *Sulfate reduction, sulfate reducing bacteria, metal sulfide, sulphidogenic jet loop reactor, sulfidogenic activity.*