



Bacterial sulfidogenic community from the surface of technogenic materials *in vitro*: composition and biofilm formation

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ABSTRACT

Microbial biofilms of sulfate-reducing bacteria *Desulfovibrio oryzae* SRB1 and SRB2 were evaluated on polyethylene terephthalate in mono- and associative bacterial cultures. *Bacillus velesensis* strains C1 and C2b suppressed both the formation of biofilm and reduced the number of sulfate-reducing bacteria in the biofilm on the polyethylene terephthalate during the 50-day experiment. A decrease in the number of sulfate-reducing bacteria compared to the monoculture was also noted in association of *D. oryzae* SRB1 + Sat1 (bacterium-satellite of the sulfate-reducing bacteria). The strain Sat1 was identified as *Anaerotignum (Clostridium) propionicum* based on some microbiological, physiological and biochemical, genetic features. The importance of studying existing interactions between microorganisms in the ferrosphere and plastisphere is emphasized.

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