



Tylosin effect on methanogenesis in an anaerobic biomass from swine wastewater treatment

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Abstract

The effect of different concentrations of tylosin on methane production was investigated: first methanogenesis in a biomass without contact with the antibiotic, and later the ability of the sludge to adapt to increasing concentrations of tylosin. Results showed that, for biomass that had no contact with the antibiotic, the presence of tylosin inhibits the generation of methane even at concentrations as small as 0.01 mg L⁻¹, and samples at concentrations above 0.5 mg L⁻¹ produced practically no methane, whereas, in the digesters acclimated in the presence of tylosin at a concentration of 0.01 to 0.065 mg L⁻¹, methanogenesis is not inhibited in the presence of antibiotic and the generation of methane is improved. This behaviour suggests the microorganisms have developed not only resistance to the antibiotic but also an ability to metabolize it.

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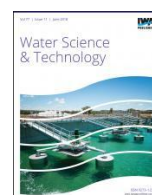
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