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Understanding Azo Dye Anaerobic Bio-decolorization with Artificial Redox**Mediator Supplement: Considering the Methane Production**

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Abstract

Artificial redox mediators (ARM) have been proven to accelerate the azo dye anaerobic bio-reduction (ADAB) but the mechanisms involved are still unclear.

Previous studies do seldom focus on the production of methane during the ADAB, particularly if supplemented with ARM. Our studies revealed that the supplement of ARM could significantly accelerate the decolorization rate, recover the inhibited methanogenesis and decrease extracellular polymeric substance secretion in an ADAB system. Supplement of an ARM only enhanced the pre-existing metabolic pathway of

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