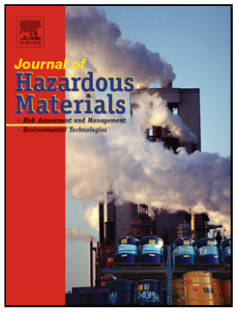

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Bacterial communities in haloalkaliphilic sulfate-reducing bioreactors under different electron donors revealed by 16S rRNA MiSeq sequencing

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Research highlights:

>Bacterial communities of haloalkaliphilic bioreactors were investigated.

>MiSeq was first used in analysis of communities of haloalkaliphilic bioreactors.

>Electron donors had significant effect on bacterial communities.

ABSTRACT

Biological technology used to treat flue gas is useful to replace conventional treatment, but there is sulfide inhibition. However, no sulfide toxicity effect was observed in haloalkaliphilic bioreactors. The performance of the ethanol-fed bioreactor was better than that of lactate-, glucose-, and formate-fed bioreactor, respectively. To support this result strongly, Illumina MiSeq paired-end sequencing of 16S rRNA gene was applied to investigate the bacterial communities. A total of 389971 effective sequences were

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