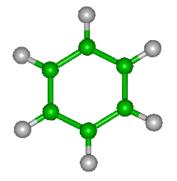


Anaerobic biodegradation of benzene in contaminated soils

Nico Tan Wim van Doesburg Fons Stams







Research aim



- Isolate anaerobic organisms degraded benzene (nitrate and sulfate)
- study their physiological and phylogenetic properties to get insight into their occurrence and distribution in polluted soils

- Two enrichments (chlorate and nitrate) that degrade benzene
- Determining their composition (genetically)
- Looking at their physiological properties (intermediates)





Research plans



- Isolate anaerobic organisms degraded benzene
- Characterize the enrichment cultures
- Test intermediates
- Isotopic fractionation experiment





Conferences and publications



- Conferences
 - Bodemdiep 2002
 - Consoil 2003 in Gent (poster presentation)
 - Bodemdiep 2003 (oral presentation)
 - ESEB 2004 April 25-28 in Oostende (abstract submitted)
 - (Bodemdiep 2004 June ??)
 - (ISME 2004 August 22-27 in Cancun)



Conferences and publications



Publications

- Anaerobic biodegradation of benzene in contaminated Dutch soils (proceedings Consoil 2003)
 - Nico C.G. Tan¹, Sander A.B. Weelink¹, Wim van Doesburg¹, Alette Langenhoff² and Alfons J.M. Stams¹
- Anaerobic biodegradation of benzene in contaminated soils (proceedings Bodemdiep 2003)
 - Nico C.G. Tan¹, Sander A.B. Weelink¹, Wim van Doesburg¹, Alette Langenhoff² and Alfons J.M. Stams¹
- Anaerobic benzene degradation coupled with chlorate reduction (abstract ESEB 2004)
 - Nico C.G. Tan¹, Wim van Doesburg¹, Jan Gerritse², Alette A.M. Langenhoff² and Alfons J.M. Stams¹



Conferences and publications



Publications

- Benzene degradation coupled with chlorate reduction in an enrichment culture
- Anaerobic benzene degradation coupled with nitrate reduction in an enrichment culture
- Degradation of benzene in chlorate reducing column systems