



For quantification of
key dechlorinating
microbes



The presence/absence and concentration of *Dehalococcoides* (Dhc) and *Dehalobacter* (Dhb) bacteria are critical to bioremediation of many chlorinated compounds, including chlorinated ethenes, ethanes, methanes and propanes. Gene-Trac[®] quantitative polymerase chain reaction (qPCR) testing is used to characterize and quantify these key dechlorinating bacteria at contaminated sites.

Do your *Dehalococcoides* have the right stuff? Use Gene-Trac[®] VC

Researchers at Stanford University have characterized vinyl chloride (VC) reductase (*vcrA*) which catalyzes the conversion of VC to non-toxic ethene, and is strongly correlated with complete dechlorination of chlorinated ethenes. Moreover, the absence of *vcrA* often leads to toxic VC accumulation and research indicates that *vcrA* is a more ubiquitous VC-reductase compared to *bvcA*¹. This means that if you want to confirm complete dechlorination activity *vcrA* is the essential target.

SiREM offers "Gene-Trac[®] VC", a test for *vcrA*, through an exclusive license agreement with Stanford University*. Now you can use Gene-Trac[®] Dhc** to quantify the number of Dhc and Gene-Trac[®] VC to confirm that Dhc detected are efficient VC dechlorinating bacteria.

***Dehalobacter* "the other Dechlorinator"**

Dehalobacter bacteria are another important group in the dechlorination of chlorinated ethanes, including 1,1,1-trichloroethane and 1,2-dichloroethane and some chlorinated methanes, including chloroform. Add *Dehalobacter* quantification (Gene-Trac[®] Dhb) to your testing suite where these compounds are of potential concern.

Gene-Trac[®] Features

- Exclusive technology licensing agreements with Stanford University* and DuPont** help make SiREM a leader in detecting, quantifying and characterizing *Dehalococcoides* bacteria.
- Clear and comprehensive test reports provide detailed information regarding the testing protocol and quality control. Electronic data deliverables available upon request.
- Field filter protocols are available to reduce shipping costs.

Add Gene-Trac[®] testing to your next round of sampling to support MNA remedies, determine whether your site requires bioaugmentation, rule out vinyl chloride accumulation, and validate the performance of enhanced bioremediation projects.

Reference

¹van der Zaan et al., 2010 Correlation of *Dehalococcoides* 16S rRNA and Chloroethene-Reductive Dehalogenase Genes with Geochemical Conditions in Chloroethene-Contaminated Groundwater. *Appl. Environ. Microbiol.* p. 843–850 Vol. 76, No. 3.

* Exclusive License Agreement with Stanford University US Patent Application USSN 60/598459 (Spormann and McCarty)

** Exclusive License Agreement with Dupont US Patent Application 10/061,071 (Ebersole and Hendrickson)

Contact **SiREM** for a quotation or more information
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