

QuantArray-BGC®

BGC stands for biogeochemistry. Natural reduction of contaminants in the subsurface such as sorption, biodegradation, volatilization and dilution are closely coupled to complex biogeochemical reactions.

QuantArray-BGC® is a molecular biology assay that simultaneously quantifies a wide spectrum of microorganisms and genes involved in biogeochemical processes in one single analysis. Various microbial communities cover the biogeochemical (BGC) profile, which includes sulfate reduction, sulfur oxidation, iron reduction, metal oxidation, nitrification, denitrification, nitrogen fixation, fermentation, paracetogenesis, methanogenesis, and various other processes.



In order to determine these microbial communities and evaluate the potential for biodegradation, we offer QuantArray®-BGC as a cooperation partner of Microbial Insights Inc., which allows the parallel quantification of numerous genes (see below) and, in conclusion, the monitoring of individual reactions.

Quantification of the following microorganisms, processes and genes

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| Forms of microorganisms Bacteria (EBAC, ARC) Fermenter (FER) Acetogenics (AGN) Acetylene degraders (AHY) | Sulfate reduction Sulfate red. Bacteria (APS) Sulfate red. Archea (SRA) | Iron reduction Fe-reducing Bacteria (IRB) Fe-reducing Archea (IRA) Geobacter (IRG) Shewanella (IRS) |
| Nitrogen cycle NH ₄ -oxidising Bact. (AMO) NH ₄ -oxidising Archea (AOA) Nitrite oxidising Bact. (NOR) | Sulfur oxidation Sulfur oxidising Bact. (SOB) | Metal oxidation Fe-oxidising Bact. (FEOB) Mn-oxidising Bact. (MnOB) |