Quantitative Polymerase Chain Reaction (qPCR)

A qPCR test is used to identify and quantify the abundance of specific bacteria or genes relevant in contaminant biodegradation pathways. qPCR was developed in the early 1990's and been used in a variety of environmental settings that has aided contaminated site management.

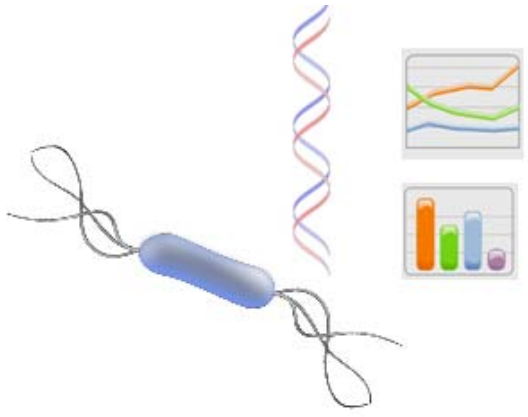
Some advantages of qPCR analyses are sensitivity, specificity and speed. qPCR analyses can be reported in as little as one day while older techniques like plate count methods can take weeks. Additionally, qPCR tests can be configured to pick out only the targets of interest and then quantify them at low detection limits.

Questions To Answer with qPCR

- Are bacteria at this site capable of degrading the contaminant?
- Are there enough contaminant degrading bacteria present under current conditions?
- Is biostimulation or bioaugmentation necessary?
- Did biostimulation enhance the growth of contaminant degrading bacteria?
- Did the bioaugmentation culture survive and grow?
- Are contaminant degrading populations maintained over time?

Currently available qPCR targets:

- **Dehalococcoides (DHC)**
- **TCE Reductase**
- **VC Reductase**
- **Dehalobacter**
- **Dehalogenimonas**
- **Universal (Bacteria)**
- **New Targets Added Monthly!**



Pace Energy Services is adding new qPCR targets every month and can develop qPCR assays for virtually any environmental project. We offer an extensive QA/QC program for qPCR.

Pace Analytical® Energy Services™