

## **Microbial communities in two river sediments demonstrate distinct anaerobic PCB dechlorination patterns**

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The rate and extent of anaerobic dechlorination of polychlorinated biphenyls (PCBs) may depend upon differences in microbial populations. In order to compare differences in dechlorination patterns and microbial population shifts, river sediment samples from the Grasse and Hudson Rivers (New York) were spiked with 2,4,5-trichlorobiphenyl (BZ-29) and supplied with various metabolism-related nutrients, including nitrogen, phosphorus and fatty acids. Initial findings indicate that the addition of nitrogen results in the accumulation of BZ-7 while the presence of phosphorus results in the production of BZ-9 and little or no BZ-7 formation in samples from the Hudson River. The influences of nutrients on dechlorination pathways are thus complex. Denaturing gradient gel electrophoresis resolved specific, PCR-amplified, 16S rDNA fragments from different BZ-29 spiked, nutrient supplied samples into distinct banding patterns. Sequencing data and BLAST results of some of the bands suggest banding is representative of specific phylogenetic relationships.