

Relative contributions of *Dehalobacter* and zero valent iron in the degradation of chlorinated methanes.

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Number of pages = 6

Number of figures = 5

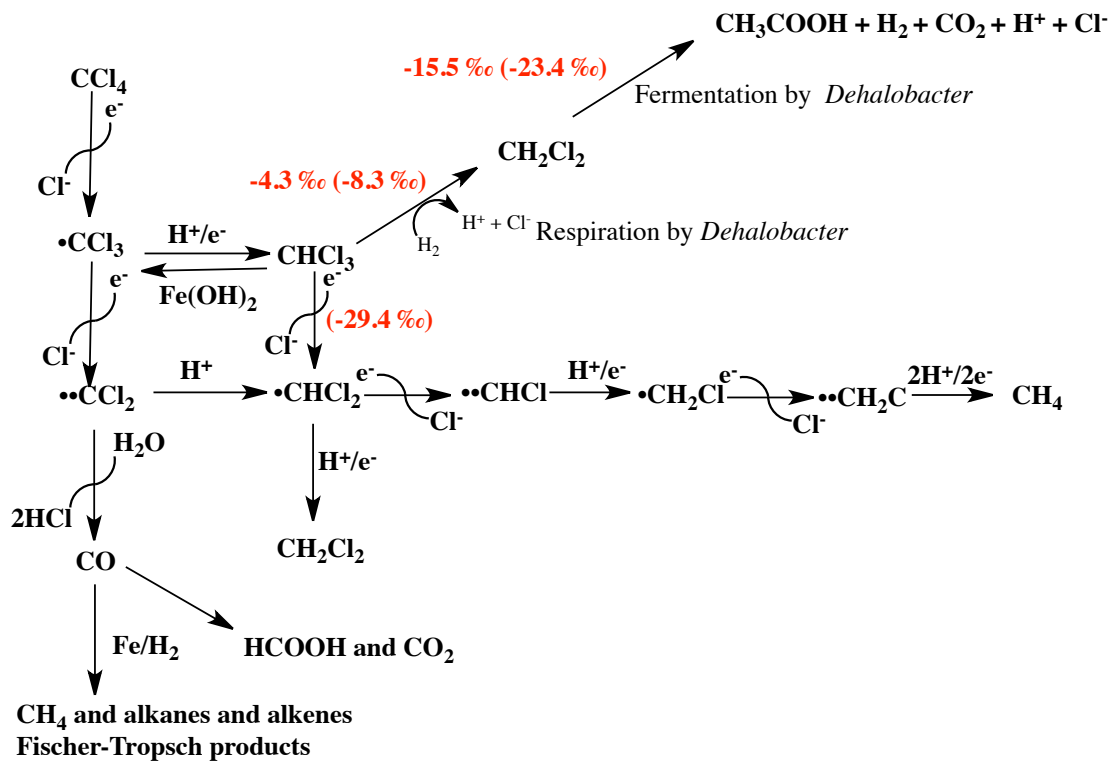
Figure S1. The transformation of tetrachloromethane and trichloromethane by Fe^0 , and the biological transformation of trichloro- and dichloromethane by *Dehalobacter* species. The numbers in red are the isotope enrichment factors discovered in the current study, and the numbers in parenthesis are the isotope enrichment factors in the presence of Fe^0 .

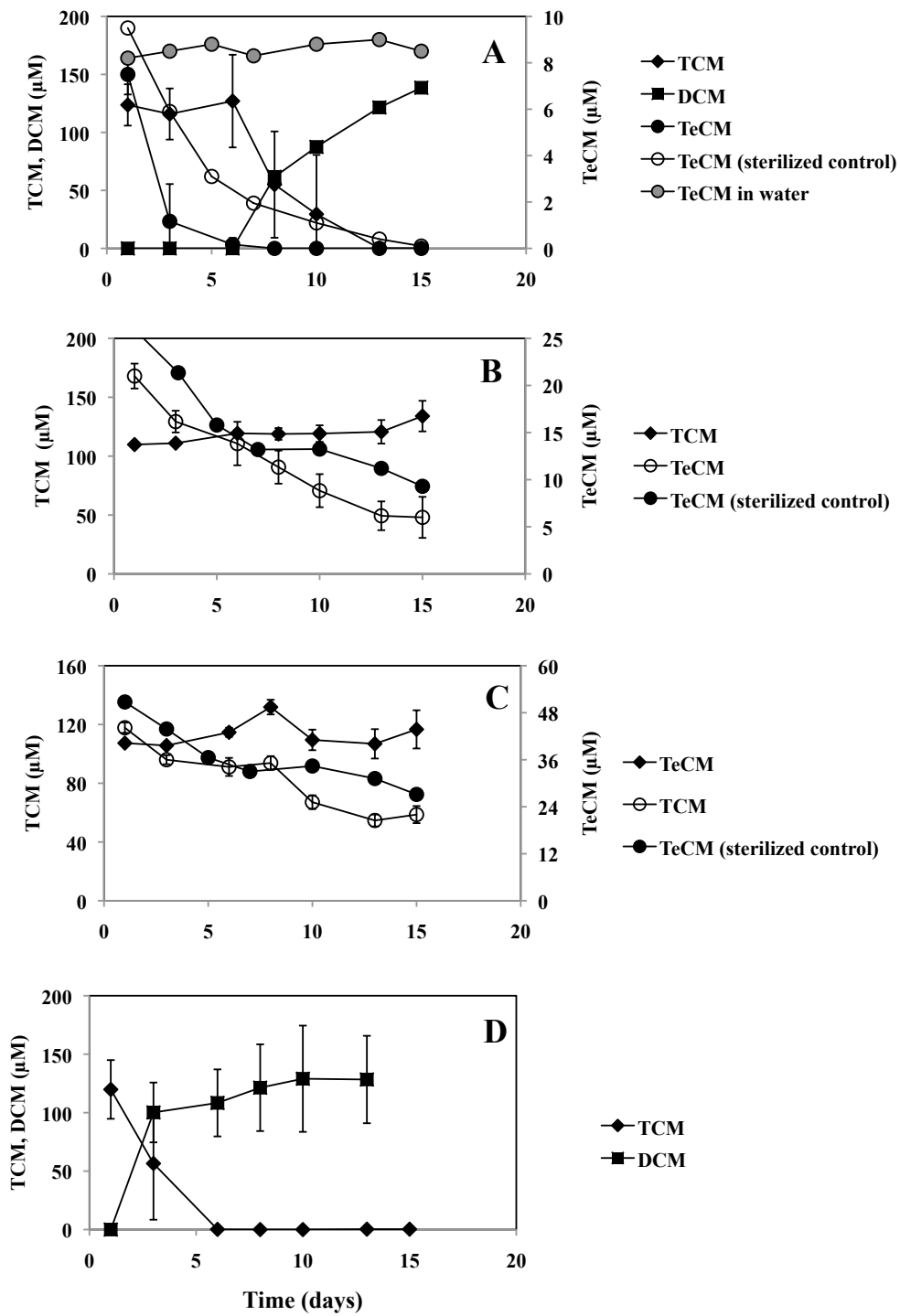
Figure S2. The inhibitory effect of tetrachloromethane (TeCM) on trichloromethane (TCM) respiration at four TeCM concentrations: **A.** 13 μM **B.** 32 μM **C.** 65 μM and **D** 0 μM . To account for abiotic losses of TeCM, controls included: TeCM in water and autoclaved cultures containing cysteine and sulfide. Error bars represent one standard deviation (n=3).

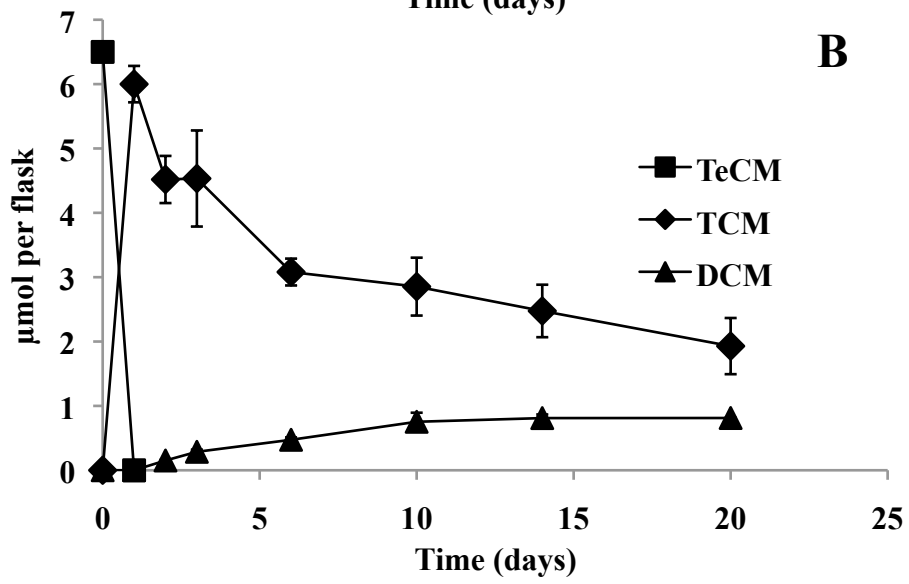
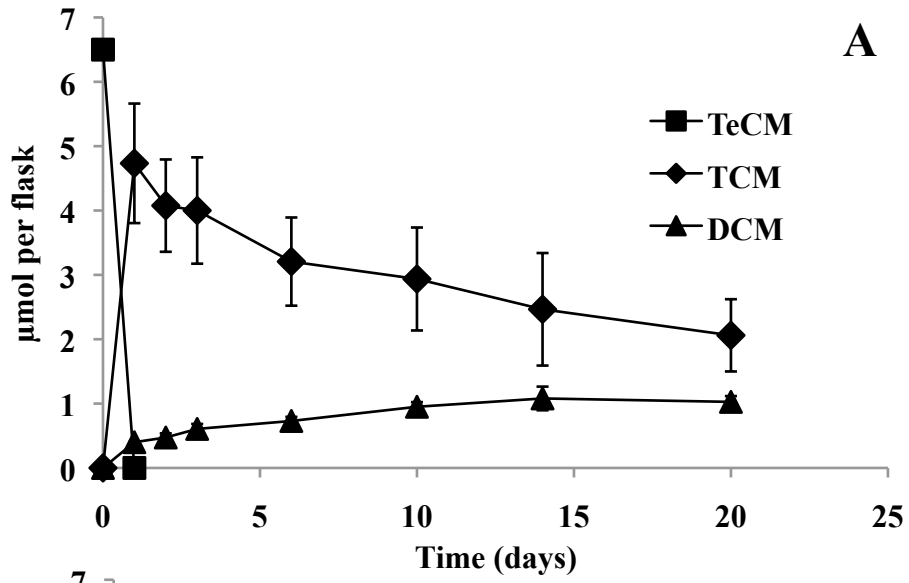
Figure S3. Dechlorination of Tetrachloromethane (TeCM) with Fe^0 and subsequent dechlorination of trichloromethane when CFH2 was inoculated before (**A**) and after (**B**) TeCM has been abiotically removed. Error bars represent one standard deviation (n=3).

Figure S4. Plots of the change in $\delta^{13}\text{C}$ in the fraction of remaining trichloromethane (*f*) in individual replicates. **A-C.** Abiotic reaction with Fe^0 . **D-F.** Combined biological and abiotic degradation by Fe^0 and culture CFH2, **G-I.** Biological degradation by culture CFH2 with H_2 as the electron donor.

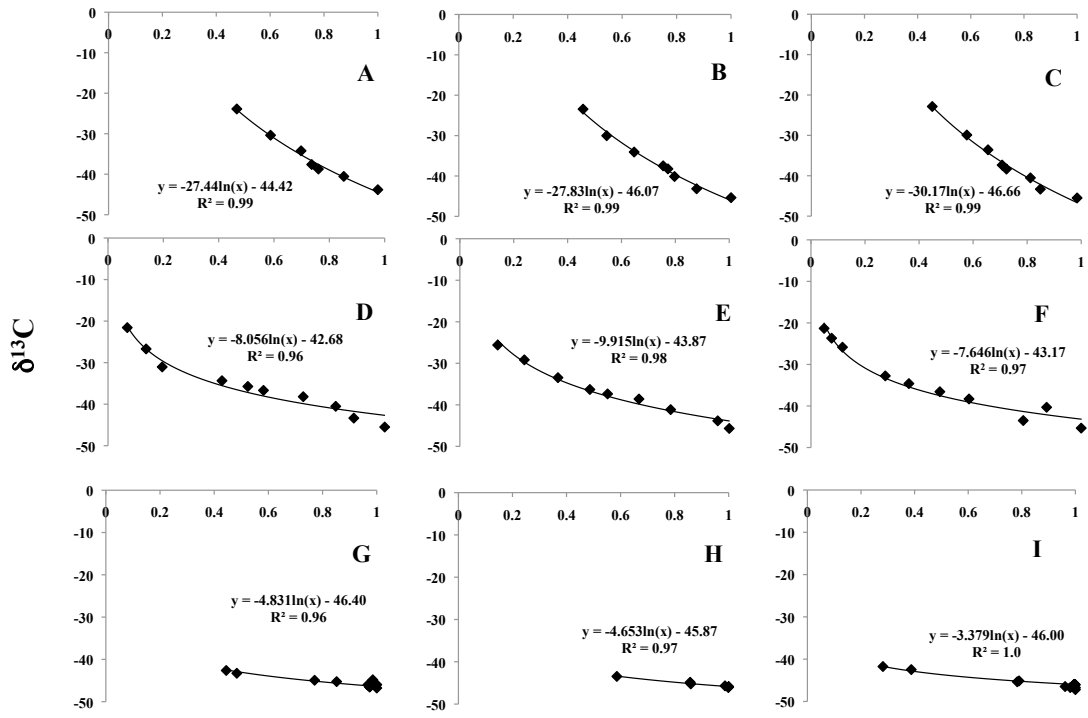
Figure S5. Plots of the change in $\delta^{13}\text{C}$ in the fraction of remaining dichloromethane (*f*) in individual replicates during its depletion by culture DCMD (**A-C**) and DCMD with Fe^0 (**D-G**).







Fraction of TCM remaining (f)



Fraction of DCM remaining (f)

