

Propane biostimulation in biologically activated carbon (BAC) selects for bacterial clades adept at degrading persistent water pollutants

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Supplemental Information

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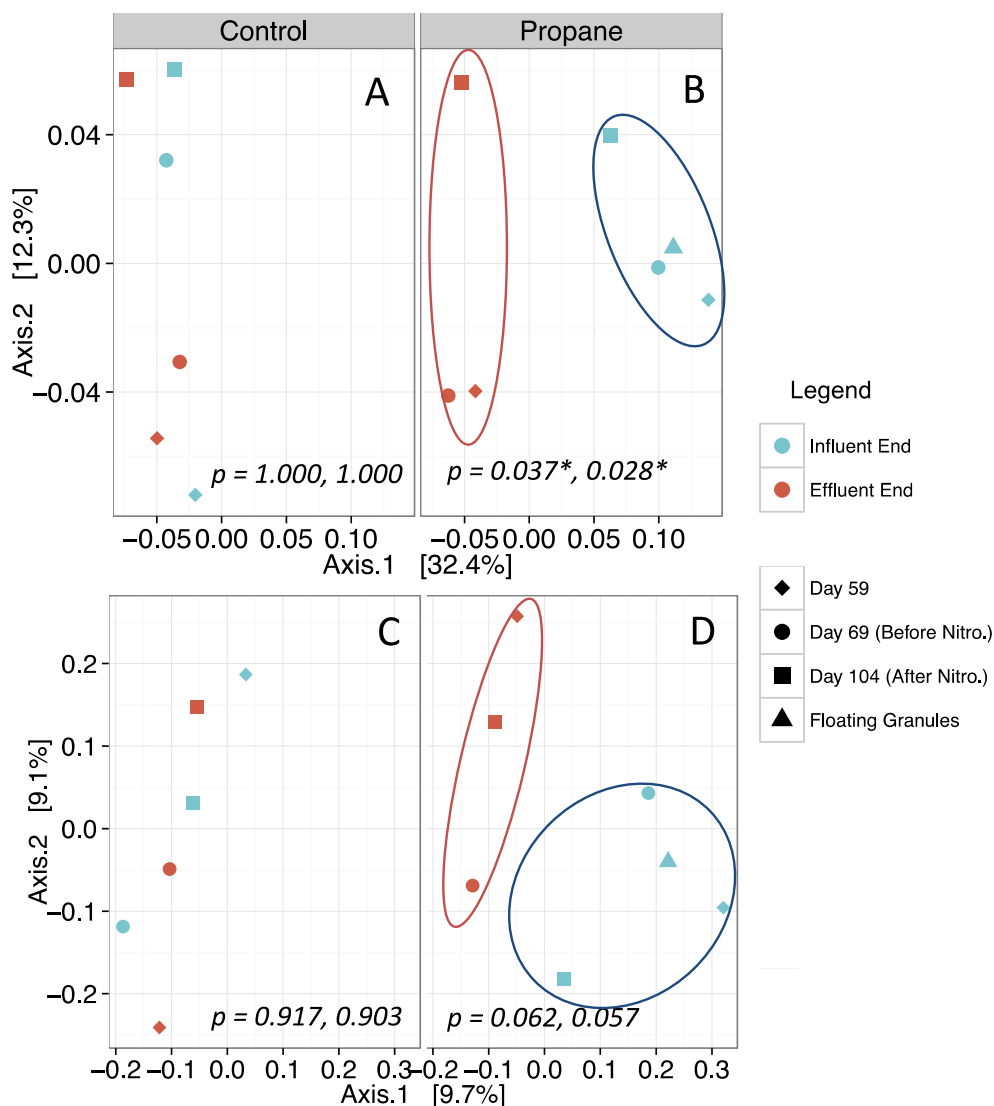


Figure S1: Principal coordinate analyses of the BAC columns where A,C are the control column samples and B,D are the propane-amended column samples. Blue represents samples from the influent portion and red represents samples from the effluent portion of the columns. Shapes are indicative of the day DNA extractions were conducted on from the start of column operation. “Before Nitro.” and “After Nitro.” represent BAC extracts before and after the nitrosamine pulse respectively. A and B utilize weighted-UniFrac while C and D utilize unweighted-UniFrac distance matrices. p-values represent the statistical comparison of the influent versus effluent samples of each respective quadrant of the figure with the first representing the ADONIS and the second the ANOSIM test outcomes. A star indicates statistical significance with $p < 0.05$.

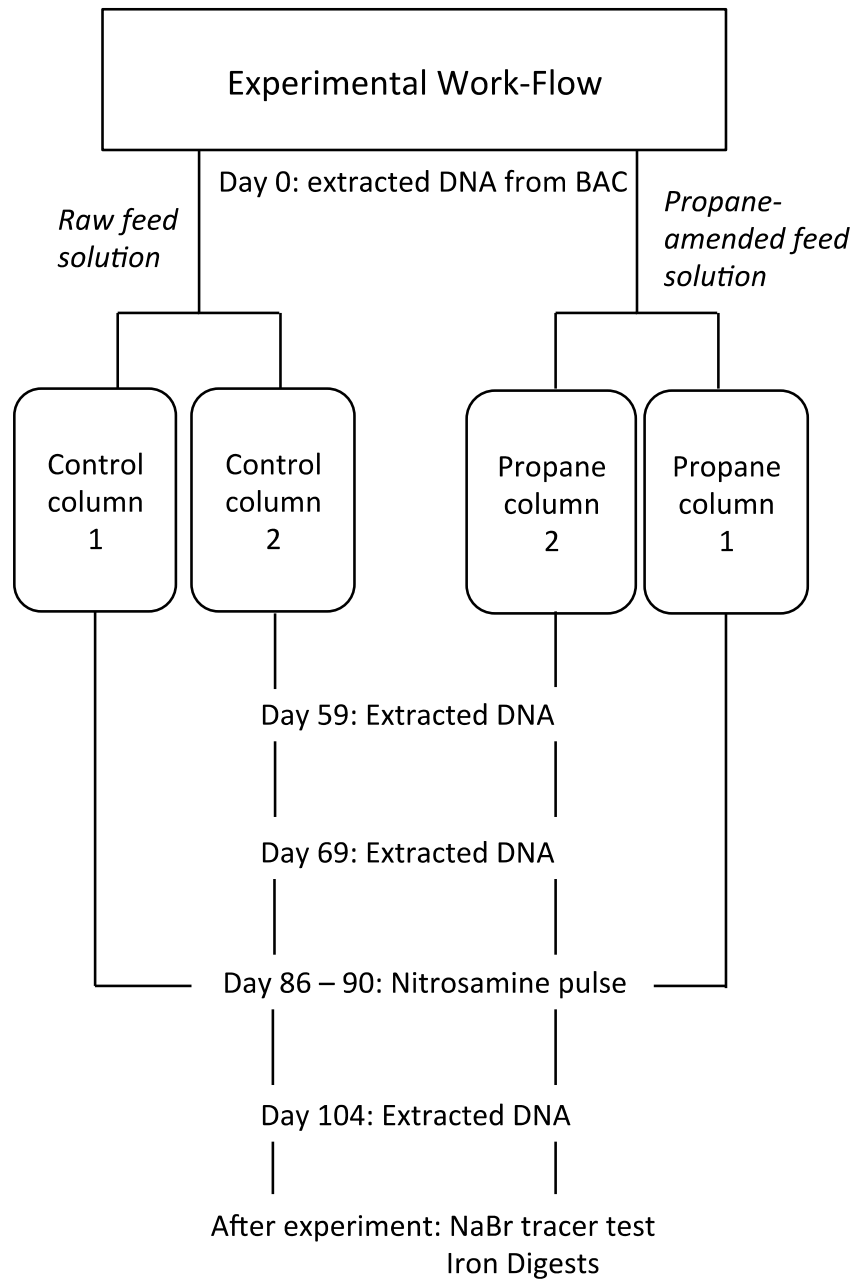


Figure S2: The experimental work-flow. DNA was extracted in triplicate from the control column 2 and the propane column 2 on the dates indicated. The nitrosamine pulse was applied to both control and both propane-amended columns.

Table S1: The relative abundance of each genus at the respective time sampled in the influent and effluent regions of both column types.

Column	Influent/Effluent	Time (days)	Relative Abundance				
			<i>Pelosiinus</i>	<i>Dechloro.</i>	<i>Nitrospira</i>	<i>Geobac.</i>	<i>Propion.</i>
Original BAC	-	-	0.18	0.09	0.18	1.1	0.27
Propane	Influent	59	12.89	1.38	1.85	0.24	1.03
Propane	Influent	69	9.08	1.52	2.75	0.7	1.27
Propane	Influent	69*	6.04	2.36	4.11	2.44	2.01
Propane	Influent	104	7.59	1.39	3.74	1.37	2.67
Control	Influent	59	0.08	0.04	5.54	0.32	0.36
Control	Influent	69	0.06	0	6.25	0.06	0.45
Control	Influent	104	0.02	0.07	4.3	0.47	1.13

*Floating granule sample at 69 days.

Dechloro. = Dechloromonas, Geobac. = Geobacter, and Propion. = Propionivibrio.