

Table S1. The contents of COD, total Kjeldahl nitrogen (TKN), ammonium nitrogen ($\text{NH}_4^+\text{-N}$), nitrite (NO_2^-) and nitrate (NO_3^-) in the samples from the test tank with the SBES installed and the control tank (without the SBES installed), in two feeding schemes.

Condition		[COD] (mg L ⁻¹)	[TKN] (mg L ⁻¹)	[NH ₄ ⁺ -N] (mg L ⁻¹)	[NO ₂ ⁻] (mg L ⁻¹)	[NO ₃ ⁻] (mg L ⁻¹)
Water sample - scheme 1x	Test	32.0 ± 3.186	8.233 ± 1.552	5.623 ± 0.524	0.124 ± 0.1	0.006 ± 0.0025
	Control	44.0 ± 3.488	9.7 ± 1.611	5.71 ± 0.228	0.224 ± 0.18	0.002 ± 0.001
Water sample - scheme 2x	Test	83.867 ± 3.597	9.345 ± 1.544	6.633 ± 0.742	0.019 ± 0.003	1.19 ± 0.38
	Control	115.933 ± 6.389	6.868 ± 1.356	6.233 ± 0.391	0.012 ± 0.005	1.12 ± 0.46
Sediment sample - scheme 1x	Test	26877.667 ± 400.958	404.177 ± 10.002	33.533 ± 1.142	N.A.	N.A.
	Control	27239.0 ± 550.579	512.767 ± 10.354	46.217 ± 1.714	N.A.	N.A.
Sediment sample - scheme 2x	Test	40681.667 ± 870.718	661.44 ± 9.89	39.771 ± 3.201	N.A.	N.A.
	Control	41848.333 ± 380.082	685.664 ± 8.775	50.59 ± 3.355	N.A.	N.A.

Note: scheme 1x: the tanks were fed with 0.051 g feed d⁻¹ per tank; scheme 2x: the tanks were fed with 0.11 g feed d⁻¹ per tank. Samples were taken after the enrichment period, i.e. once the electrical current generated had been stable (about 1-2 months after the beginning of the experiment). (N.A.: not applicable)

Table S2. Sequence analyses of the DNA fragments in the bands cut off from the DGGE gel presented in Figure 5 (using the sequence data on GenBank, NCBI)

Band number	Closest to	Homology
I1	<i>Brevundimonas</i> sp.	99%
I2	<i>Fictibacillus phosphorivorans</i>	99%
I3	<i>Brevibacillus chosinensis</i>	99%
C1	<i>Brevundimonas vesicularis</i>	99%
C2	<i>Desulfobacula toluolica</i>	99%
C3	Uncultured bacterium	97%
T1	<i>Methylophilus rhizosphaerae</i>	99%
T2 (=I1)	<i>Brevundimonas</i> sp.	99%
T3	<i>Desulfatitalea tepidiphila</i>	99%
T4	<i>Thiothrix eikelboomii</i>	99%

Appendix 1. Sequences of 16S rDNA fragments in the bands cut off from the DGGE gel presented in Figure 5

>I1

GCGGATTGCTTAATGCGTTAGCTGCGTCACCGAAATGCATGCATCCCGACAACCTAGCAAT
CATCGTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGAGC
CTCAGCGTCAGTAATGAGCCAGTGTGTCGCCTTCGCCACTGGTGTTCCTCCGAATATCTAC
GAATTTACCTCTACACTCGGAGTTCCACACACCTCTCTCATACTCAAGACACCCAGTATC
AAAGGCAATTCCGAGGTTGAGCCCCGGGATTTACCCCCTGACTTAAATGTCCGCCTACGCT
CCCTTTACGCCAGTAATTCCGAGCAACGCTAGCCCCCTTCGTATTACCGCGGCTGCTGGC
ACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTGTTCGTCGCCGGTGAAAGAATTT
TACAATCCTACTAACATCATCATTACGCGCCATGGCTGCGTCAGGCTT

>I2

GAGTGCTTAATGTGTTAACTTCAGGACTGAGGGTGAACCCCCAACACCTAGCACTCATC
GTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGCGCCT
CACCGTCAGTTACAGGCCAAAAAGCCGCCTTCGCCACTGGGGTTCTCCACATCTCTAC
GCATTTACCGCTACACGTGGAATTCCACTTTTCTCTCCTGCACTCAAGTCTCCAGTT
TCCAATGACCCTCCACGTTGAGCCGTGGGCTTTCACATCAGACTTAAGAGACCGCCTG
CGCGCGCTTTACACCCAATAATCCGGATAACGCTTGCCACCTACGTATTACCCCGGCT
GCTGGCACGTATTTAGCCGTGGCTTTCTGGTTAGGTACCGTCAAGGTACGAGCAGTTAC
TCTCGTACTTGTTCCTTCTAACAACAGAGCTTTACAACCCGAAGGCCTTCATCGCTCA
CGCGGCGTTGCTCGGTGAGGCTTTCGCCATTGCCGAAAATTCCCTACTGCTGCCTCCC
GTAGG

>I3

GAGTGCTTATTGCGTTAGCTGCGGCACTGAGGGTATTGAAACCCCCAACACCTAGCACTCA
TCGTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGCGCCT
CAGCGTCAGTTACAGACCAGAAAGCCGCCTTCGCCACTGGTGTTCCTCCACATCTCTACGC
ATTTACCGCTACACGTGGAATACCGCTTTCCTCTTCTGCACTCAAGCTACACAGTTTCCG
ATGCAAACCGGAGTTGAGCTCCGGGCTTTAACACCAGACTTACATAGCCGCCTGCGCGCGC
TTTACGCCCAATAAATCCGGACAACGCTTGCCACCTACGTATTACCGCGGCTGCTGGCACG
TAGTTAGCCGTGGCTTTCCTCGTCGGGTACCGTCAAGGTACCGCCCTATTCGAACGGTACTT
GTTTCGTCCCTAACAAACAGAACTTTACAATCCAAAGACCTTCATCGTTCACGCGGCGTTGCT
CCATCAGACTT

>C1

TGCTTAATGCGTTAGCTGCGTCACCGAAATGCATGCATCCCGACAACCTAGCAATCATCG
TTTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGCGCCTC
AGCGTCAGTAATGAGCCAGTGTGTCGCCTTCGCCACTGGTGTTCCTCCCAATATATACA
AATTTACCTCTACACTCGGAGTTCCACACACCTCTCTCATACTCAAGACACCCAGTAT
CAAAGGCAATTCGAGGTTGAGCCCCGGGATTTACCCCCTGACTTAAATGTCCGCCTAC
GCTCCCTTTACGCCAGAAATTCGAGAAACGCTAGCCCCCTTCGTATTACCGCGGCTG
CTGGCACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTATCGTCCCCGGTGAA
AGAATTTTACAATCCTAAGACCTTCATCATTACGCGGCATGGCTGCGTCAGGCTTTTCG
CCCATTGCGCAAGATTCCCCACTGCTGCCTCCCGTAGG

>C2

ACTTAATGCGTTAGCTTGGGCACAGCAGATTTAATATCCGCCACACCTAGTGTACATCG
TTTACTGCGTGGACTACCAGGGTATCTAATCCTGTTTCGCTACCCACGCCCTTCGCGCCTCA

GCGTCAGTATCGGTCCAGAAAGCTGCCTTCGCCATCGGTGTTCCCTCCTGATATCTACGAA
TTTACCTCTACACCGGGAATCCACTTCCCTCTCCCGTACTCAAGTCTTGCTGTTTCAA
ATGCACTTCCAGGGTTGAGCCCTGGGCTTTACATCTGACCGACAAGACCGCCTACGCGC
CCTTTACGCCAATAATTCCGAATAACGCTTGACCCCCCGTATTACCGCGGCTGCTGGC
ACGGAGTTAGCCGGTGCTTC

>C3

GAGCACTTANGNGTTACCTAACGGCACCACAGGGGTCAACACCCGTGACACCGAGTGCTCATCG
TTTACAGTGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACACTTTCGCGCCTCAGCGT
CAGAACCGGTCCAGGTAGCCGCTTTCGCCACCGGTGTTCCCTCCCAATATCTACGCATTTACCG
CTACACTGGGAATTCCACTACCTCTCCCGGCTCAAGCCTGCCAGTTTCAGAGGCAATTCCTC
GGTTGAGCCGAGGGATTTACCCCTGACTTAGCGGGCCGCTACGCGCCCTTTACGCCAATGA
TTCCGAATAACGCTCGCCCCCTCCGTATTACCGCGGCTGCTGGCACGGAGTTAGCCGGGGCTTC
CTCTGGAGGTACCGTCAGAGAGCCCGGTATTGACCGGGTTCCTTTCGTCCCACCTGACAGGAG
TTTACAACCCGAAGGCCTTCATCCTCCACGCGGCTGCTGGATCAGGCTTTCGCCATTGTCC
AATATTCCCCTGCTGCCTCCCGTAG

>T1

ACTACTTACGCGTTAGCTGCGTACTCATGGATTTTACTCCACCAACAACCTAGTAGACATCGTTTAGG
GCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGTGCATGAGCGTCAATATTATC
CCAGGGGGCTGCCTTCGCCATTGGTATTCTCCACATCTCTACGCATTTCACTGCTACACGTGGAATT
CTACCCCCCTCTGACATATTCTAGTCTGGCAGTTTCAAACGCAGTTCCCAAGTTGAGCTCGGGGATTT
CACATCTGACTTGCCAAACCGCTGCGCACGCTTTACGCCAGTAATTCGATTAACGCTCGCACCCT
ACGTATTACCGCGGCTGCTGGCACGTAGTTAGCCGGTGTCTTATGAAGGTACCGTCAGCCTCACCA
TTTATTTCGATGGTAAGTTTTCTTCCCTTGCAGAAAGAGCTTTACAACCCGAAGGCCTTCTTCACTCACG
CGGAATGGCTGGATCAGGCTTGCGCCATTGTCCAAAATTCCCCTGCTGCCTCCCGTA

>T2

GCGGATTGCTTAATGCGTTAGCTGCGTCACCGAAATGCATGCATCCCGACAACCTAGCAAT
CATCGTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGAGC
CTCAGCGTCAGTAATGAGCCAGTGTGTGCGCTTCGCCACTGGTGTTCCTCCGAATATCTAC
GAATTTACCTCTACACTCGGAGTTCCACACACCTCTCTCATACTCAAGACACCCAGTATC
AAAGGCAATTCCGAGGTTGAGCCCCGGGATTTACCCCTGACTTAAATGTCCGCCTACGCT
CCCTTTACGCCAGTAATTCCGAGCAACGCTAGCCCCCTTCGTATTACCGCGGCTGCTGGC
ACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTGTCTGTCGCCGGTGAAAGAATTT
TACAATCCTACTAACATCATCATTCACGCGCCATGGCTGCGTCAGGCTT

>T3

CACCTAATGCGTTAGCTTTCGGCACCGACAGGGTCAATACCCGCTACACCTAGTGAACAAC
GTTTACTGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTCCCCACGCTTTCGCGCCTC
AGCGTCAGTATTGGTCCAGGAAGTCGCTTTCGCCACAGGTGTTCCCTCCTGATATCTACGA
ATTTACCTCTACACCAGGAATTCCACTTCCCTCTCCATACTCAAGCTAGGTAGTATC
AAATGCACTTCCGGGGTTGAGCCCCGGGCTTTACACCTGACTGACCAAGCCGCCTACGC
GCCCTTTACGCCAATGATTCCGAGTAACGCTTGACCCCCCGTATTACCGCGGCTGCTG
GCACGGAGTTAGCCGG

>T4

GCGTTAGCTGCACCACCGACCCCTTAGTTGGAGCCGACGGCTAGTTGACATCGT
TTACGGCGTGGACTACCAGGGTATCTAATCCTGTTTGCTACCCACGCTTTCGTGCCTCAG
CGTCAATGTTGGTCCAGGAAGTCGCTTTCGCCACTGATGTTCTTCCGATCTCTATGCAT
TTCACCGCTACACCGAAATTCACTTCCCTCTCCACATTCTAGCTCCCAGTATCGGA

TGCAGTTCCCAGGTTAAGCCCGGGGATTTACATCCGACTTAAAGCACCGCCTACGTGCC
CTTTACGCCCAGTAATTCCGATTAACGCTTGCACCCTCCGTATTACCGCGGCTGCTGGCA
CGGAGTTAGCCGGTGCTTTTTCTGTGGGTAACGTCATTATCTTCCCCACTAAAAGTGCTT
TACAACCCGCAGGCCTTCTTCACACACGCGGTATTGCTGGATCAGGGTTGCCCCATTGT
CCAATATTCCCGACTGCTGCCTCCCGTAGG