

**Table S2.** Results of pairwise *post-hoc* comparisons by Tukey's HSD tests for bacterial abundance, individual cell size (ICS), biovolume (BV), bacterial productivity (BP) and specific bacterial productivity (SBP) and by the multivariate version of the *t*-statistic for active bacterial community composition (ABCC).

**Bacterial abundance (BA)**

Experiment 1

Q\p		F		S	
		f	s	f	s
F	f		<b>0.0448</b>	<b>0.0017</b>	<b>0.006</b>
	s	4.612		<b>0.0001</b>	<b>0.0001</b>
S	f	13.018	17.63		0.0536
	s	9.763	14.375	3.255	

Experiment 2

Q\p		F-s		S	
		f	s	f	s
F-s	f		<b>0.0003</b>	<b>0.0001</b>	<b>0.0008</b>
	s	21.161		<b>0.0001</b>	<b>0.0001</b>
S-f	f	22.477	43.638		<b>0.0004</b>
	s	11.499	32.660	10.977	

**Individual cell size (ICS)**

Experiment 1

Q\p		F		S	
		f	s	f	s
F	f		0.1865	0.083	<b>0.0024</b>
	s	1.760		0.3399	<b>0.003</b>
S	f	2.843	1.073		<b>0.0056</b>
	s	11.861	10.091	9.018	

Experiment 2

Q\p		F-s		S	
		f	s	f	s
F-s	f		0.5704	<b>0.0011</b>	<b>0.0001</b>
	s	0.480		<b>0.0016</b>	<b>0.0001</b>
S-f	f	8.986	9.465		<b>0.0011</b>
	s	24.434	24.913	15.448	

**Biovolume (BV)**

Experiment 1

Q\p		F		S	
		f	s	f	s
F	f		<b>0.0439</b>	0.1536	0.0712
	s	3.266		<b>0.0034</b>	0.519
S	f	2.020	5.296		<b>0.0175</b>
	s	4.420	1.153	6.450	

Experiment 2

Q\p		F-s		S	
		f	s	f	s
F-s	f		<b>0.0372</b>	0.0682	0.057
	s	6.095		<b>0.0002</b>	<b>0.0402</b>
S-f	f	4.916	1.179		0.2123
	s	5.293	0.802	0.377	

### Bacterial production (BP)

Experiment 1

Q\p		F		S	
		f	s	f	s
F	f		<b>0.0372</b>	0.0682	0.057
	s	6.095		<b>0.0002</b>	<b>0.0402</b>
S	f	4.916	1.179		0.2123
	s	5.293	0.802	0.377	

Experiment 2

Q\p		F-s		S	
		f	s	f	s
F-s	f		0.85	<b>0.0201</b>	<b>0.0454</b>
	s	0.081		<b>0.0133</b>	<b>0.0429</b>
S-f	f	1.891	1.972		0.1323
	s	5.587	5.668	3.696	

### Specific bacterial production (SBP)

Experiment 1

Q\p		F		S	
		f	s	f	s
F	f		<b>0.009</b>	0.0679	<b>0.0124</b>
	s	8.776		<b>0.005</b>	0.1166
S	f	4.900	3.876		<b>0.0138</b>
	s	8.114	0.662	3.214	

Experiment 2

Q\p		F-s		S	
		f	s	f	s
F-s	f		0.1418	<b>0.0008</b>	0.0518
	s	1.482		<b>0.0002</b>	<b>0.0185</b>
S-f	f	9.689	11.171		0.0625
	s	5.005	6.487	4.684	

### Active bacterial community composition (ABCC)

Experiment 1

t\p*		F		S	
		f	s	f	s
F	f		<b>0.0232</b>	<b>0.0025</b>	
	s	2.151			<b>0.0007</b>
S	f	3.797			<b>0.0308</b>
	s		6.698	2.143	

Experiment 2

t\p*		F-s		S-f	
		f	s	f	s
F-s	f		<b>0.0416</b>	<b>0.0033</b>	
	s	2.141			0.0514
S-f	f	3.485			0.1879
	s		1.821	1.389	

\*  $p$ -values stand for Monte Carlo corrected  $p$ -values.