

Table S1. Number of high quality sequences obtained per sample. Sample name indicates: reactor, period and sampling day.

| Sample | <i>Bacteria</i> | <i>Archaea</i> |
|---------------|------------------------|-----------------------|
| R1.P2.133 | 31490 | 34553 |
| R1.P2.140 | 24396 | 80557 |
| R1.P2.147 | 21946 | 64055 |
| R1.P2.210 | 33180 | 86818 |
| R1.P2.270 | 24081 | 100194 |
| R1.P2.300 | 27393 | 67909 |
| R1.P3.324 | 31718 | 66602 |
| R1.P3.338 | 25552 | 71550 |
| R2.P2.133 | 33881 | 63065 |
| R2.P2.147 | 24780 | 49264 |
| R2.P2.205 | 20788 | 38201 |
| R2.P2.301 | 27964 | 45931 |
| R2.P4.442 | 25281 | 20092 |
| R2.P4.484 | 27671 | 37294 |
| R2.P4.491 | 31963 | 39220 |
| R2.P6.592 | 28165 | 40310 |
| R2.P6.611 | 30716 | 44003 |
| R2.P6.637 | 30678 | 26475 |
| R2.P7.644 | 27033 | 67864 |
| R2.P7.646 | 33502 | 45524 |
| R2.P7.652 | 34075 | 43405 |
| R2.P7.667 | 24623 | 27924 |
| R2.P7.681 | 35086 | 33278 |
| R2.P7.688 | 29631 | 24636 |
| R2.P7.695 | 31680 | 28439 |
| R2.P7.697 | 36301 | 24034 |
| R2.P7.704 | 33479 | 24626 |
| Average | 29150 | 47993 |
| Total | 787053 | 1295823 |