|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Spearman | |
|  |  |  | W | P | rs | P |
| Tank C1 and C2 | | Ammonia | 256 | < 0.0001 | 0.8641 | < 0.0001 |
| Nitrite | 17 | 0.5774 | 0.3978 | 0.0709 |
| Phosphate | 55 | 0.0559 | 0.9207 | < 0.0001 |
| Cylinders | | Ammonia | 300 | 0.0003 | 0.9767 | < 0.0001 |
| Nitrite | 166 | 0.0025 | 0.8191 | < 0.0001 |
| Phosphate | 85 | 0.0048 | 0.9283 | < 0.0001 |
|  |  |  | U | | P | |
| Survival | | SC - LD | 26 | | 0.06037 | |
| LD - HD | 0 | | 0.0286 | |

Supplementary Table S1. Wilcoxon matched-pairs signed rank test (Two tailed) with Spearman post hoc analysis of the differences in the concentrations of inorganics (ammonia, nitrite and phosphate) in Tank C1 and C2 and among Cylinders (A).

Mann Whitney test (Two-tailed) of the survival in different culture conditions: standard culture (SC) and low density (LD) replicates, low density replicates and high density (HD) replicates.

Supplementary Figure S1. Overview of the automated culture plants. The water collection tank A is the first on the right. Follows the tank B (for filtration and ozonization) that is the second from the right. The next two tanks (C1 and C2) are the first two from the left and they contain 2 culture cylinders each. In front the operative panel is visible with the CCD on the top left connected with the electric plugs for effectors.



Supplementary Figure S2. Overview of the larval rearing cylinder. The tube connected to the base is used to insufflate an air stopper.