Appendix table 5–1. Quality-control replicates for qPCR and qRT-PCR molecular methods for cyanobacteria.

[AVLD is absolute value log10 difference between qPCR and qRT-PCR replicate samples A and B; molecular assays reported in copies per 100   
milliliters; <, less than (below sample reporting limit); >, greater than; ND, not determined because there were two values below detection;   
E, estimated; N/A, not applicable because assay was not run for the sample]

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample** | **Total cyanobacteria DNA genes** | | | **Total *Microcystis* DNA genes** | | | ***Microcystis mcyE* DNA toxin genes** | | |
| **A** | **B** | **ALD** | **A** | **B** | **AVLD** | **A** | **B** | **AVLD** |
| 5/5/11 buoy 3 | 3.8 x 108 | 5.3 x 108 | 0.14 | 1.5 x 106 | 1.5 x 106 | 0 | <170 | <170 | ND |
| 8/2/11 buoy 3 | 9.5 x 108 | 1.8 x 109 | 0.28 | 1.1 x 105 | 1.8 x 105 | 0.21 | <240 | <240 | ND |
| 10/25/11 buoy 3 | 1.9 x 108 | 3.5 x 108 | 0.26 | 4.8 x 103 E | 5.2 x 104 | 1.03 | <180 | 1.4 x 103 | >0.89 |
| 10/25/11 buoy 5 | 7.4 x 108 | 6.8 x 108 | 0.04 | 5.9 x 104 | 7.8 x 104 | 0.12 | 1.0 x 103 | 990 | 0.00 |
| 6/26/12 buoy 6 | 4.3 x 108 | 4.2 x 108 | 0.01 | 6.7 x 103 E | 7.9 x 104 | 1.07 | <300 | 2.2 x 103 | >0.86 |
| 9/11/12 buoy 2 | 8.7 x 108 | 9.4 x 108 | 0.03 | 3.7 x 104 | 8.7 x 104 | 0.37 | 640 E | 2.4 x 103 | 0.57 |
| **Average AVLD** |  |  | **0.13** |  |  | **0.47** |  |  | **>0.58** |
| **Sample** | ***Planktothrix mcyE* DNA toxin genes** | | | ***Microcystis mcyE* RNA transcripts** | | | ***Planktothrix mcyE* RNA transcripts** | | |
| **A** | **B** | **AVLD** | **A** | **B** | **AVLD** | **A** | **B** | **AVLD** |
| 5/5/11 buoy 3 | 2.8 x 106 | 2.8 x 106 | 0 | N/A | N/A | N/A | N/A | N/A | N/A |
| 8/2/11 buoy 3 | 5.5 x 106 | 1.1 x 107 | 0.30 | N/A | N/A | N/A | N/A | N/A | N/A |
| 10/25/11 buoy 3 | 9.7 x 106 | 1.1 x 107 | 0.05 | N/A | N/A | N/A | N/A | N/A | N/A |
| 10/25/11 buoy 5 | 1.6 x 107 | 2.1 x 107 | 0.12 | N/A | N/A | N/A | N/A | N/A | N/A |
| 6/26/12 buoy 6 | 2.0 x 107 | 1.8 x 107 | 0.04 | N/A | N/A | N/A | N/A | N/A | N/A |
| 9/11/12 buoy 2 | 3.7 x 107 | 3.6 x 107 | 0.01 | <1.2 x 103 | <750 | ND | 2.5 x 104 | 8.5 x 103 | 0.47 |
| **Average AVLD** |  |  | **0.09** |  |  | **ND** |  |  | **0.47** |