

**Bend Genetics, LLC**  
87 Scripps Drive, Ste. 301  
Sacramento, CA 95825  
Tel: (916) 550-1048

**Date:** 5/29/2018

**Subject:** Cyanobacteria testing results

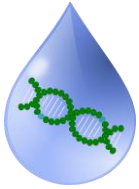
**From:** Tim Otten, Laboratory Director

**To:** Greg Hoover  
Tahoe Keys Property Owners Association

Attached are the testing results for ELISA and QPCR analyses conducted on three samples collected from the Tahoe Keys on 5/10/2018. These data have been reviewed and are considered final.

**Analyses included in this report:**

- Quantification of specific cyanobacterial toxins (anatoxin-a and microcystin/nodularin) using enzyme linked immunosorbent assay (ELISA).
- Quantification of toxigenic cyanobacteria (anatoxin-a and microcystin-producing cells) based on cyanobacterial gene abundances inferred by real-time quantitative polymerase chain reaction (QPCR) method.

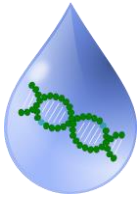


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**Project:** SWAMP\_FHAB\_2018  
Analysis for Toxigenic Cyanobacteria  
**Project #:** Tahoe Keys POA  
**Reported:** 5/29/2018 10:45

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>BG_ID</b>	<b>Date Collected</b>	<b>Date Received</b>	<b>Matrix</b>	<b>Preserved</b>
WP-18	TK28	5/24/2018 9:40	5/24/2018 14:50	Water	N
WP-19	TK29	5/24/2018 9:15	5/24/2018 14:50	Water	N
WP-20	TK30	5/24/2018 8:50	5/24/2018 14:50	Water	N

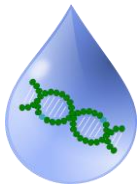


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**SAMPLE RESULTS**

Sample ID	Method	Target	Result	Units	Quantitation	
					Limit	Notes
WP-18	ELISA	Anatoxin-a	ND	µg/L	0.15	U
WP-18	ELISA	Microcystin/Nod.	ND	µg/L	0.15	U
WP-18	QPCR	Anatoxin-a	ND	copies/mL	100	U
WP-18	QPCR	Microcystin/Nod.	ND	copies/mL	100	U
WP-19	ELISA	Anatoxin-a	ND	µg/L	0.15	U
WP-19	ELISA	Microcystin/Nod.	ND	µg/L	0.15	U
WP-19	QPCR	Anatoxin-a	ND	copies/mL	100	U
WP-19	QPCR	Microcystin/Nod.	592	copies/mL	100	
WP-20	ELISA	Anatoxin-a	ND	µg/L	0.15	U
WP-20	ELISA	Microcystin/Nod.	ND	µg/L	0.15	U
WP-20	QPCR	Anatoxin-a	178	copies/mL	100	
WP-20	QPCR	Microcystin/Nod.	594	copies/mL	100	



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**QUALITY CONTROL**

Method	Analyte	Result	Qualifiers / Comments	Units	Spike Level	%REC	%REC Limits
ELISA	ATX - Blank	ND	U	µg/L	0		
ELISA	ATX - Positive	0.70		µg/L	0.75	93.7	70-130
ELISA	ATX - Matrix Sp	1.29		µg/L	1.25	103.5	70-130
ELISA	MC - Blank	ND	U	µg/L	0		
ELISA	MC - Positive	0.58		µg/L	0.75	78.0	70-130
ELISA	MC - Matrix Sp	0.925		µg/L	1.00	92.5	70-130
QPCR	anaC - Blank	ND	U	copies/mL	0		
QPCR	mcyE - Blank	ND	U	copies/mL	0		
QPCR	mcyE – Spike	49,912		copies/mL	50,000	99.8	70-130

**QUALIFIERS/COMMENTS/NOTES**

- C1 The reported concentration for this analyte is below the quantification limit.
- C2 The reported concentration for this analyte is above the calibration range of the instrument.
- J The reported result for this analyte should be considered an estimated value.
- U Undetected