



Public Health
Prevent. Promote. Protect.

Public Health – Muskegon County • 1903 Marquette Ave – Suite S101 • Muskegon, MI 49442
Main: 231.724.6208 or PublicHealth.EnvironmentalHealth.co.muskegon.mi.us

8/6/2024

RE: Lab results from the Bureau of Labs concerning Harmful Algae Bloom levels in Muskegon Lake and recent Microcystin toxin strip tests.

Dear Jonathon Seyferth,

In partnership with Public Health Muskegon County (PHMC), Grand Valley State University-Annis Water Resource Institute staff took samples for Harmful Algae Bloom toxicity on 7/8/24. Samples were sent to the Bureau of Labs in Lansing Michigan. Results were recently received and reviewed by PHMC staff. The Michigan Department of Health and Human Services Waterborne Disease Epidemiologist, Susan Peters, recommends that both people and pets avoid any visible blooms/discoloration in Muskegon Lake. I understand the samples were taken over 4 weeks ago, but algae blooms may persist throughout the high-use season. The Environmental Protection Agency (EPA) recommendation is 8 ug/L or less for recreational activity. Results were 17.5 ug/L for total microcystin. See attachment for results. Furthermore, GVSU staff tested Muskegon Lake on 7/31/2024 and 8/5/2024 with toxin strips and found it to be >10 parts per billion. This would confirm the likelihood of the continuance of the bloom.

It is our recommendation that all beaches found on Muskegon Lake post informational signs concerning HABs for the entire high-use season. MDHHS has recently created some HABs social media templates to be used by communities with these challenges (see attachment). Feel free to use any or all for your social platforms. We plan to continue to monitor the situation for changes. Upon request, PHMC staff will post the beach located in your jurisdiction. However, I have included warning signs if you would prefer to post the beach. See attachments.

Sincerely,

Michael Eslick
Operations Manager – Environmental Health
Public Health Muskegon County
eslickmi@co.muskegon.mi.us
231-724-1253

Cc: Microcystins/Nodularin-Recreational Water Report – Bureau of Laboratories: report # 5536801
Cc: MICHAP Summer Resource Packet – 05082024
Attachment: example of HAB informational sign (posting)

Bureau of Laboratories

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES
PO BOX 30035
3350 N. MARTIN LUTHER KING, JR. BLVD
LANSING, MI 48906
PHONE: (517)335-8059
FAX: 5173359871

Microcystins/Nodularin-Recreational water Report

REPORT TO: MDHHS - DIVISION OF ENVIRONMENTAL
HEALTH - HABS
333 S GRAND AVE

SUBMITTING AGENCY: MICHIGAN DEPT OF ENV, GREAT LAKES AND ENERGY - HABS
AGENCY ID#: 941751
525 W Allegan Street
Lansing, MI 48909

Date Reported: 07/24/2024 at 2:05 pm

Report Number: 5536801

Method: Analysis of Microcystins in Recreational
Water by LC-MSMS, based upon EPA 544

Received Date: 7/19/2024 12:00:00AM

Instrument: LC-MSMS

Received Time: 10:41:00AM

Collected By: ALEXIS PORTER

Sample ID: EN24-250031

Collection Date: 07/08/2024
Collection Time: 0800

Sample Description: MUSKEGON LAKE
Date Analyzed: 7/23/2024

Analyte	Result	RL	Units	Dilution	ISTD % Rec	Qualifier
MC-HTYR	<0.5	0.5	µg/L	1.00000	108.33	
MC-LA	1.7	0.5	µg/L	1.00000	107.06	
MC-LF	<0.5	0.5	µg/L	1.00000	107.06	
MC-LR	6.0	0.5	µg/L	1.00000	108.33	
MC-LR Asp3	<0.5	0.5	µg/L	1.00000	108.33	
MC-LW	<0.5	0.5	µg/L	1.00000	107.06	
MC-LY	<0.5	0.5	µg/L	1.00000	107.06	
MC-RR	6.2	0.5	µg/L	1.00000	108.33	
MC-WR	<0.5	0.5	µg/L	1.00000	108.33	
MC-YR	1.3	0.5	µg/L	1.00000	108.33	
Nodularin	<0.5	0.5	µg/L	1.00000	108.33	
Total Microcystin	15.2		µg/L		0.00	

Sample ID: EN24-250032

Collection Date: 07/09/2024
Collection Time: 1630

Sample Description: MUSKEGON LAKE
Date Analyzed: 7/23/2024

Analyte	Result	RL	Units	Dilution	ISTD % Rec	Qualifier
MC-HTYR	<0.5	0.5	µg/L	1.00000	106.30	
MC-LA	1.9	0.5	µg/L	1.00000	109.14	
MC-LF	<0.5	0.5	µg/L	1.00000	109.14	
MC-LR	7.1	0.5	µg/L	1.00000	106.30	

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Microcystins/Nodularin-Recreational water Report

REPORT TO: MDHHS - DIVISION OF ENVIRONMENTAL
HEALTH - HABS
333 S GRAND AVE

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AGENCY ID#: 941751
525 W Allegan Street
Lansing, MI 48909

MC-LR Asp3	0.6	0.5	µg/L	1.00000	106.30
MC-LW	<0.5	0.5	µg/L	1.00000	109.14
MC-LY	<0.5	0.5	µg/L	1.00000	109.14
MC-RR	6.0	0.5	µg/L	1.00000	106.30
MC-WR	<0.5	0.5	µg/L	1.00000	106.30
MC-YR	1.9	0.5	µg/L	1.00000	106.30
Nodularin	<0.5	0.5	µg/L	1.00000	106.30
Total Microcystin	17.5		µg/L		0.00

Qualifiers:	Description
B	Detectable levels above the RL were found in the laboratory blank.
C	Sample compromised during extraction. Calculated result is not possible.
D	A dilution was performed to obtain a calculated result within the analytical measurement range.
Hp	Sample hold time exceeded prior to extraction.
Ha	Sample hold time exceeded after extraction.
T	Intake temperature of sample exceeded 10° C.
QNS	Bottle arrived broken or empty.
ISS	Internal standard is outside of the established range.
IR	Reference ion ratio is outside of the established range.

Reviewed By:

Philip Blankenship

Philip Blankenship (Lab Scientist)

Bureau of Laboratories

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Anatoxin-a/Cylindrospermopsin-Recreational water Report

REPORT TO: MDHHS - DIVISION OF ENVIRONMENTAL
HEALTH - HABS
333 S GRAND AVE

SUBMITTING AGENCY: MICHIGAN DEPT OF ENV, GREAT LAKES AND ENERGY - HABS
AGENCY ID#: 941751
525 W Allegan Street
Lansing, MI 48909

Date Reported: 07/25/2024 at 8:14 am

Report Number: 5537322

Method: Analysis of Anatoxin in Recreational Water
by LC-MSMS, based upon EPA 545

Received Date: 7/19/2024 12:00:00AM

Instrument: LC-MSMS

Received Time: 10:41:00AM

Collected By: ALEXIS PORTER

Sample ID: EN24-350031

Collection Date: 07/08/2024
Collection Time: 0800

Sample Description: MUSKEGON LAKE
Date Analyzed: 7/23/2024

Analyte	Result	RL	Units	Dilution	ISTD % Rec	Qualifier
Anatoxin-A	<0.50	0.50	µg/L	1.00000	98.00	
Cylindrospermopsin	<0.25	0.25	µg/L	1.00000	73.50	

Sample ID: EN24-350032

Collection Date: 07/09/2024
Collection Time: 1630

Sample Description: MUSKEGON LAKE
Date Analyzed: 7/23/2024

Analyte	Result	RL	Units	Dilution	ISTD % Rec	Qualifier
Anatoxin-A	<0.50	0.50	µg/L	1.00000	98.24	
Cylindrospermopsin	<0.25	0.25	µg/L	1.00000	71.17	

Bureau of Laboratories

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Anatoxin-a/Cylindrospermopsin-Recreational water Report

REPORT TO: MDHHS - DIVISION OF ENVIRONMENTAL
HEALTH - HABS
333 S GRAND AVE

SUBMITTING AGENCY: MICHIGAN DEPT OF ENV, GREAT LAKES AND ENERGY - HABS
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Qualifiers:	Description
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