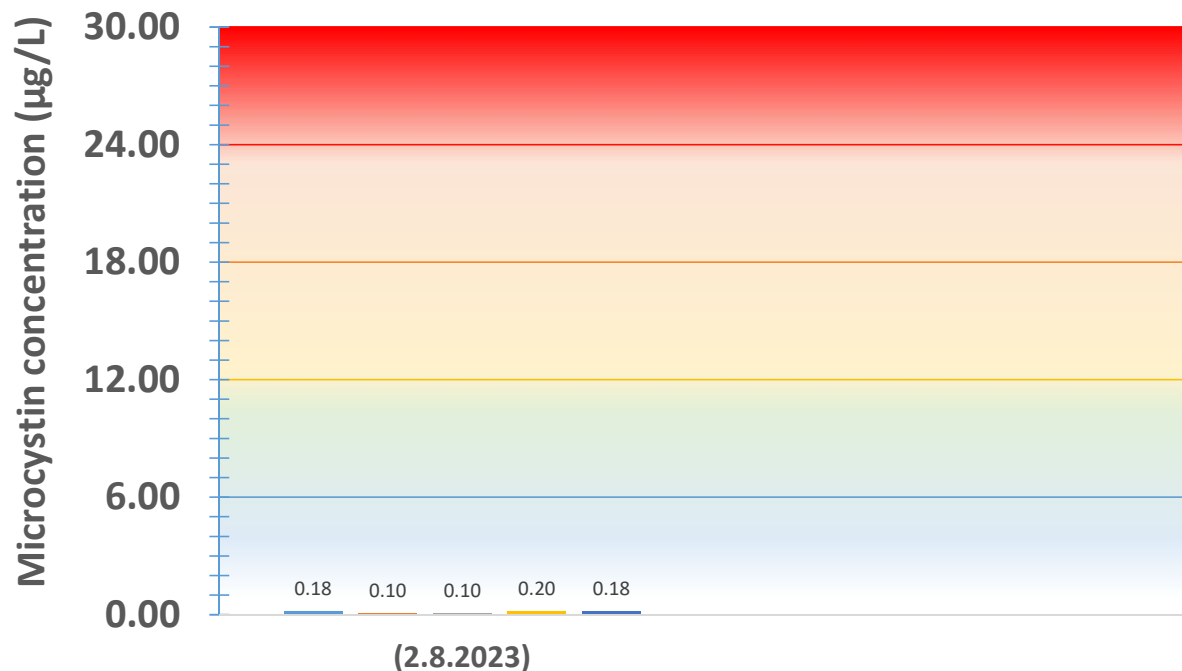


2.8.2023

Cyanobacterial hepatotoxin(Microcystin) concentration in Littoistenjärvi 2023



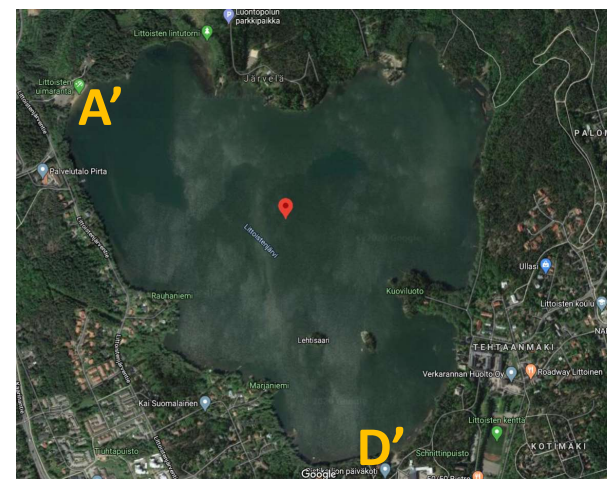
WHO recreational water guideline value for microcystin: **24 µg/L**

WHO long term drinking-water guideline value for microcystin: **1 µg/L**

Assay detection limit: **0.25 µg/L**

■ 1_A_Saarten taus ■ 2_B_Koilliselkä ■ 3_C_Luoteisselkä ■ 4_A'_Hiekkaranta ■ 5_D'_Ristikallion Uimaranta

Analysis: 3.8.2023, Report by Sultana Akter, Dept of Life Technologies (Biotechnology), Faculty of Technology, Univ of Turku



On 2.8.2023, microcystin concentration in Littoistenjärvi water is very low (below detection limit of 0.25 µg/L).

Interpretation (3.8.2023 SA)

Collection of Raw water samples : **2.8.2023**,

Immunoassay analysis: 3.8.2023

Immunoassay detection limit on 3.8.2023: 0.25 µg/L of Microcystin-LR

Before analysis, samples were heated at 90 °C for 10 min to release cell bound toxins if any.

The results represent the total cyclic peptide hepatotoxin amount (already released toxin in water and the cell bound toxin) .

The immunoassay detects cyanobacterial peptide hepatotoxins (microcystins and/or nodularin).

For quantification, microcystin-LR was used as standard.

Result:

In Littoistenjärvi water, the detected cyanobacterial peptide hepatotoxin (free and cell bound microcystin) concentrations (µg/L) are as follows:

2.8.2023 A_Saarten taus: below 0.25 µg/L
 B_Koilliselkä: below 0.25 µg/L
 C_Luoteisselkä: below 0.25 µg/L
 A'_Hiekkaranta: below 0.25 µg/L
 D'_Ristikallion Uimaranta: below 0.25 µg/L

**World Health Organization (WHO)
recommended provisional guideline values**

Provisional lifetime **drinking**-water guideline value for microcystin: **1 µg/L**

Provisional short-term (2 weeks) drinking-water guideline value for microcystin 12 µg/L (Adult), 3 µg/L (children)

Provisional **recreational** water guideline value for microcystin: **24 µg/L**

Reference:

Chorus, I., & Welker, M. (2021). Toxic cyanobacteria in water: a guide to their public health consequences, monitoring and management (p. 858). Taylor & Francis. P25-28

Date of analysis: 3.8.2023

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