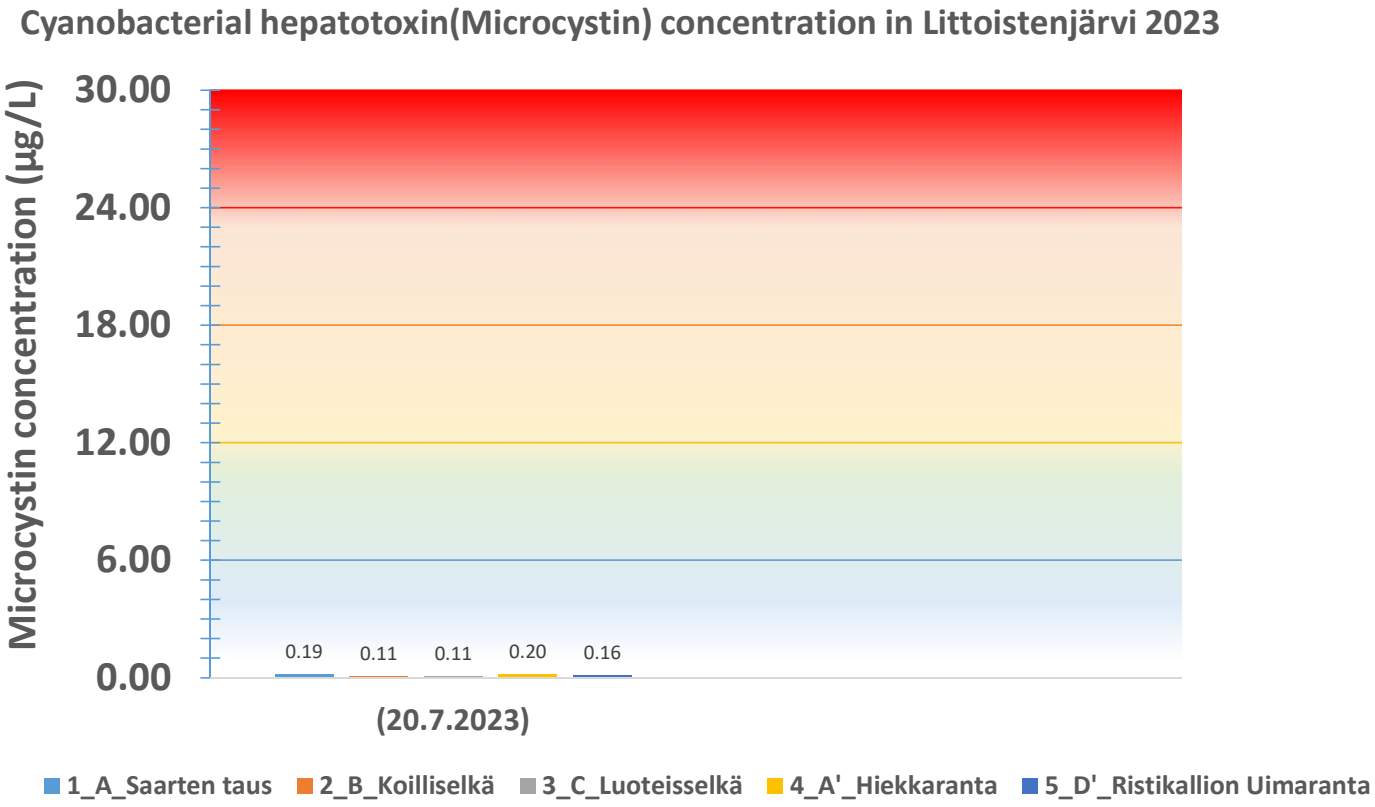
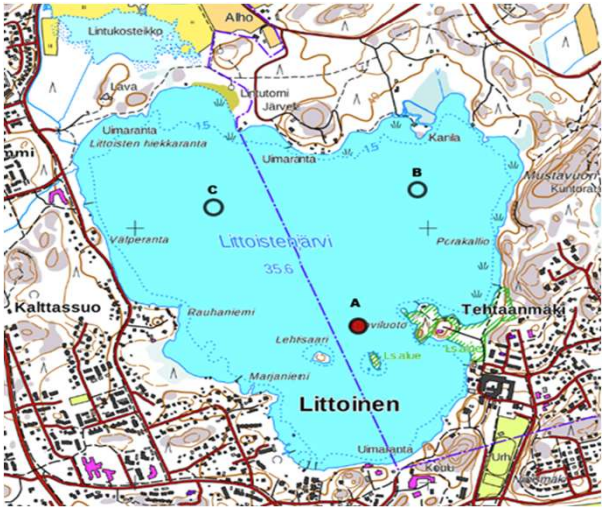
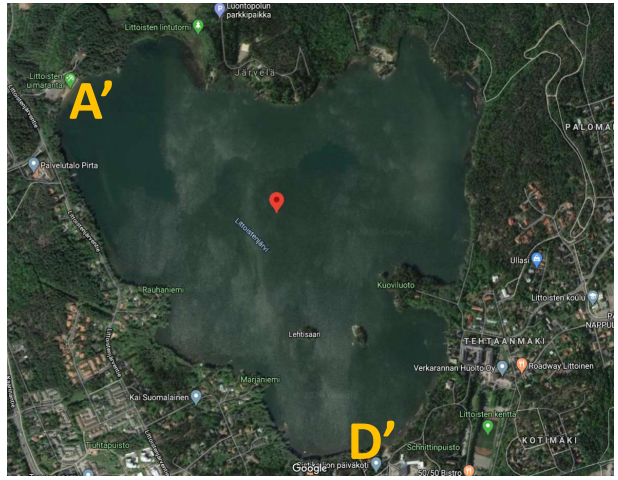
20.7.2023



Analysis: 21.7.2023, Report by Sultana Akter, Dept of Life Technologies (Biotechnology), Faculty of Technology, Univ of Turku





On 20.7.2023, microcystin concentration in Littoistenjärvi water is very low (below 0.2 µg/L)

Interpretation (21.7.2023 SA)
Collection of Raw water samples : 20.7.2023,
Immunoassay analysis: 21.7.2023
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:

20.7.2023 A_Saarten taus: below 0.2 µg/L
B_Koilliselkä: below 0.2 µg/L
C_Luoteisselkä: below 0.2 µg/L
A'_Hiekkaranta: below 0.2 µg/L
D'_Ristikallion Uimaranta: below 0.2 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: 21.7.2023
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