TRACCIA 2 - ESTRATTA

1. Analisi dei dati di spettometria di massa attraverso approcci bioinformatici.

2. Approcci per la valutazione della bioattività di prodotti naturali per fini applicativi.

Informatica

1. Organizzazione e analisi dati con Excel

Inglese

Cyanobacterial harmful algal blooms (CyanoHABs) threaten public health and freshwater ecosystems worldwide. In this study, our main goal was to explore the dynamics of cyanobacterial blooms and how microcystins (MCs) move from the Lalla Takerkoust reservoir to the nearby farms. We used Landsat imagery, molecular analysis, collecting and analyzing physicochemical data, and assessing toxins using HPLC. Our investigation identified two cyanobacterial species responsible for the blooms: Microcystis sp. and Synechococcus sp. Our Microcystis strain produced three MC variants (MC-RR, MC-YR, and MC-LR), with MC-RR exhibiting the highest concentrations in dissolved and intracellular toxins. In contrast, our Synechococcus strain did not produce any detectable toxins. To validate our Normalized Difference Vegetation Index (NDVI) results, we utilized limnological data, including algal cell counts, and quantified MCs in freeze-dried Microcystis bloom samples collected from the reservoir.

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