**Microcystin health risk in irrigation water and agricultural crops**

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[x]  Oral presentation [ ]  Poster

Health risks associated with the consumption of microcystin-containing agricultural products have been rising worldwide in toxic cyanobacteria-occurring waters. Fate and biohazard related to the consumption of environmentally realistic doses of microcystins (MCs) in fruits and vegetables are poorly tackled. Therefore, this field study assessed their bioaccumulation in fruit crops, which were irrigated with MC-contaminated irrigation water sourced from the Lalla Takerkoust reservoir nearby. MCs accumulated in edible parts were quantified using an enzyme-linked immunosorbent assay in order to calculate the health risk indicators associated with the consumption of these fruits. Pomegranate accumulated the highest concentration of MCs (26.50 µg kg-1), with an estimated daily intake (EDI) being 22 and 53-fold higher than the limit dose (0.04 µg kg-1) for adults and children, respectively, posing a very high-risk level. Most fruit samples showed EDI values above the limit dose, showing moderate- to high-risk levels. These results point out the urgent need for establishing monitoring and depolluting processes for MCs in toxic cyanobacteria-infested agricultural zones, not only in Morocco but far and wide.

**Keywords**: Microcystins, Fruit crops, Bioaccumulation, Health risk