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Molecular Identification of Species Present in Dietary Supplements Labelled as *Spirulina* and *Chlorella* †

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Abstract: The identity of all-natural products is essential to ensure their quality, efficiency, and safety. Dietary supplements (DS) based on cyanobacteria of the genus *Arthrospira* (Spirulina) and microalgae of *Chlorella* genus are consumed for their nutritional value. The identification of both cannot be based only on morphological characteristics due to the presence of cryptic species and their phenotypic plasticity. Objective: to identify at a molecular level the species present in DS samples labeled as DS based on "Spirulina" and on "Chlorella". Methodology: DNA was extracted from the species present in 2 DS samples, the primers were designed, and then the polymerase chain reaction (PCR) was applied. The products were sent to Macrogen for purification and sequencing. Finally, the sequences obtained were aligned using BLASTn and the NCBI database for species identification. Results: the sequencing of the amplification products confirmed that the DS sample labeled with "Spirulina" and "Chlorella" corresponds to the genus *Arthrospira* and *Chlorella*, respectively. Conclusion: the membership of the species present in the DS was confirmed according to their labeling. These quality controls are of great importance for this type of mass commercialization products since they are incorrectly considered innocuous because they are of natural origin.

Keywords: *Arthrospira*; *Chlorella*; molecular identification; dietary supplements.

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Conflicts of Interest

The authors declare no conflict of interest.