DANA ORLANDO VÉLIZ

PhD student in the field of environmental chemistry focused on the Suspect-Screening study of treated wastewater samples for the identification and prioritization of compounds based on their abundance and toxicity. The collaborations carried out with different research groups have allowed me to enrich my knowledge of chemistry and improve my skills in the laboratory and group work.
I am a proactive person and my early work experience has taught me to develop critical maturity, responsibility and dedication with the work I do.

Profile

Mail: dovqal@cid.csic.es

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Skills and Aptitudes

Teamwork
Creativity
Projects management
Organization
Effective communication

Languages

Spanish: Native

Catalan: High

English: Medium-high (Level B2)

Education

2015-2016 • INS Pons D'Icard (Tarragona): 1st year High school

2016-2017 • INS Mediterrània (Castelldefels): 2st year High school

2017-2021 • Universitat de Barcelona: Chemistry degree

2021-2022 • Universitat de Barcelona: Master's degree in Analytical Chemistry

At present • *Institute of Environmental Assessment and Water Research* (IDAEA-CSIC): PhD student in the Department of Environmental Chemistry

Professional Experience

Internship at the Faculty of Medicine and Health Sciences (Department of Physiological Sciences, *Universitat de Barcelona*)

During the practices, the determination of different biological parameters related to cellular proteins involved in the metabolism of proliferating cells (tumor or activated lymphocytes) was carried out through different analytical techniques such as electrophoresis, spectrophotometry, among others.

Among the tasks developed are included:

- thawing and culture of cells,
- analysis by Western Plot,
- colorimetric determinations by Bradford and BCA protein assay,
- and metabolomic determinations of intracellular fructose-2,6-P2 and fructose-1,6-P2.

Determination of the removal efficiency of dissolved organic matter (DOM) in aquifer water when applying different treatments (Final Degree Project, Collaboration with the *Universitat Politècnica de Catalunya*)

During the work I carried out different treatments on water samples from the aquifer and the analysis was performed by UV-Vis spectrophotometry and with the application of the PARAFAC method in the MATLAB program, I determined the most effective treatments for the elimination of DOM according to its nature (Humic or Fulvic fraction).

Suspect-screening analysis of regenerated wastewater destinated for agricultural irrigation (Final Master's Project, IDAEA-CSIC)

The activities carried out include:

- sampling in the study areas,
- Suspect-screening analysis of different types of water (residual, treated residual, surface and from the irrigation point) using liquid chromatography coupled with high-resolution mass spectrometry,
- and evaluation of the environmental risk associated with organic micro-pollutants detected in the samples analyzed.

Laboratory technician in the Department of Environmental Chemistry of the Institute of Environmental Assessment and Water Research

Support staff in the laboratory for the sampling, treatment and analysis of water from the treatment plant and slides for the MAGO and PROMISCES projects.

Additional activities

04/2022 MASTER CHEMISTRY XVII Contest.
Poster: *Identification of potentially dangerous organic pollutants present in regenerated wastewater used for agricultural irrigation*

10/2022 **18TH ANNUAL WORKSHOP ON EMERGING HIGH-RESOLUTION MASS SPECTROMETRY (HRMS).**
Oral presentation: '*Evaluation of different sample pretreatment methods for suspect screening of pollutants present in treated wastewaters*'

11/2022 **Young Researcher Day (IDAEA-CSIC)**
Attendee