

Leonardo Soto, MSc.

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1 Education

MSc in Chemistry, Uppsala University, Uppsala, Sweden 2023
MSc in Analytical Chemistry, University of Tartu, Tartu, Estonia 2023
BEng in Chemical Engineering, National Polytechnic School (NPS), Quito, Ecuador 2017

2 Professional Experience

Collaborator at the Environmental Engineering Teaching Laboratory 2020-2021
Civil and Environmental Engineering, NPS, Quito, Ecuador
supervision and advising of undergraduate students
managed equipment, reagents, purchases, maintenance, and information systems

Laboratory Technician 2017-2021
Center for Environmental Research and Control, NPS, Quito, Ecuador
managed and applied physicochemical methods according to ISO 17025
wrote SOPs, guides, technical and management procedures
developed and deployed a web app prototype for lab information management
organized the production of microbiology laboratory video tutorials

3 Research Experience

Graduate Student, lab Dr. Anneli Kruve 2023
Materials and Environmental Chemistry, Stockholm University, Stockholm, Sweden
predicting bioactivity of detected chemicals with machine learning
building molecular networks for non-targeted LC-ESI-HRMS

Graduate Student with Dr. Magnus Palmblad 2023
Center for Proteomics and Metabolomics, Leiden University, Leiden, Netherlands
building semantic graphs from LC-MS experimental methodologies

Laboratory Technician, at NPS 2019
Center for Environmental Research and Control, NPS, Quito, Ecuador
managed the TOC method with an accredited research scope under ISO 17025
statistical testing for flexible scopes

Undergraduate Student with Dr. Florinella Muñoz 2015
National Polytechnic School, Quito, Ecuador
advanced oxidation processes with ozone, activated carbon and hydrogen peroxide

4 Publications

- M. Palmblad, E. Asein, N. Bergman, A. Ivanova, L. Ramasauskas, H. Reyes, S. Ruchti, **L. Soto**, and J. Bergquist, "Semantic Annotation of Experimental Methods in Analytical Chemistry", DOI: [10.1021/acs.analchem.2c03565](https://doi.org/10.1021/acs.analchem.2c03565), Analytical Chemistry, 2022
- F. Muñoz, V. Maldonado, M. Barba, **L. Soto**, and O. Balladares, "Study of the combination of ozone with hydrogen peroxide and activated carbon in the treatment of BRL blue dye and a textile effluent", VII EPOA II CIPOA Conference, 2015

5 Academic Service

Teacher	Feb 2019 – Jun 2019
Polytechnic Training Center CCP, Quito, Ecuador	
presented courses for the National Exam for Admission to University	
Math Teacher	Dec 2017 – May 2018
Department of Basic Training, NPS, Quito, Ecuador	
prepared and presented a leveling course for high-school students within a social project	
Presenter	Jun – Aug 2017
The Science Tunnel - Max Planck Society, Quito, Ecuador	
science communication to the public at the Ecuadorian National House of Culture	
Chemistry Teacher	Aug 2015, Aug 2016
Federation of Students of the National Polytechnic School, Quito, Ecuador	
prepared and presented two undergraduate courses on Chemistry, wrote and graded exams	

6 Laboratory Internships

Technical Department	Jan 2017
Chemeng Environmental Consulting Group, Quito, Ecuador	
data processing of lab data and automated a report in Excel with formulas and macros	
Radiation Technology and Electron Accelerator Laboratory	Mar 2016
Nuclear Sciences, National Polytechnic School, Quito, Ecuador	
water sampling, calibration, and verification of laboratory equipment	
Research, Analysis and Monitoring Laboratory	Aug 2015
Secretary of Environment, Quito, Ecuador	
atomic absorption spectroscopy, spectrophotometry, passive air sampling	

7 Skills

Laboratory: HPLC-ESI-MS, IC, TOC, ASV, FTIR, electrochemistry, sample preparation
Technical: Method validation, Uncertainty estimation, Metrology, ISO 17025
Languages: Spanish - *native*. English - *advanced*. French - *basic*
Software: Cytoscape - *intermediate*. Xcalibur, MZMine - *basic*
Programming: Python, R, bash, \LaTeX - *intermediate*. SQL, PHP, HTML5 - *basic*

8 Continuing Education

Bioinformatics: Introduction and Methods	2024
Toxicology 21: Scientific Applications	2023
Applied Machine Learning in Python	2022
LC-MS Method Validation	2021
Measurement Uncertainty in Chemical Analysis	2021
ISO/IEC 17025 Laboratory Management Implementation	2019
Metrologist Training Program	2019
Project Management PMBOK® Guide	2019
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