

Alejandro Yopasá Arenas

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dados pessoais

29 anos, colombiano,
residente permanente
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contato

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R. Virginia Pátaro 223-3
Barão Geraldo, Campinas,
13084-045, Brasil

idiomas

Espanhol (nativo),
Inglês e Português (leitura e
escritura nível avançado, oral
nível intermedio)

tecnologias analíticas

Cromatografia
(HPLC/UHPLC-DAD/FLR,
UPLC-MS/MS, GC-FID/EC).
Espectroscopia (UV-Vis, IR,
Fluorescência, Raman).
Potenciometria. Polarimetria.
Caracterização (TGA, MEV,
BET). Espectroscopia
atômica: FAAS, GFAAS,
ICP-OES, ICP-MS

tecnologias várias

Dissolutores, Karl-Fisher,
Viscosímetros e demais
típicos do laboratório.

Habilidades informáticas

♥ R, Python, Matlab,
Empower, pacote office, \LaTeX ,
HTML5, Linux, Minitab, QGIS.

Resumo

Possui Mestrado em química analítica pela Universidade Estadual de Campinas (2015) e graduação em Química pela Universidad Nacional de Colombia (2011). Conhecimentos na área de Química, com ênfase em química analítica e ambiental, preparo de amostras, análise físico-químico, cromatográfico e espectrofotométrico. Experiência no desenvolvimento de métodos inovadores aplicados a matrizes complexas ambientais e industriais. Experiência em validação analítica, produto acabado e matéria prima. Conhecimento e aplicação rdc 166, 17, 31 e 53. ISO 17025, 9001, 14001.

experiência

2011–2013

AQM S.A.S.

Bogotá, Colômbia

Analista Senior

Encarregado do análise de matéria prima e produto acabado de indústrias farmacêutica, cosmética e veterinária nos laboratórios físico-químico e de cromatografia, com pessoal a cargo (entre 1 e 3 técnicos). Manutenção do sistema de gestão de qualidade e atendimento de auditorias internas e externas.

educação

2015–Atualidade **Doutorado em Química**

Instituto de Química, UNICAMP

Área: química analítica e ambiental, desenvolvimento de métodos de preparo de amostra e de determinação por cromatografia para fármacos em solos, resíduos animais e lixiviados. Desenvolvimento de métodos quimiométricos para análise de dados espectrofotométricos. Modelagem de processos de transporte de fármacos.

2013–2015

Mestrado em Química

Instituto de Química, UNICAMP

Área: química analítica e ambiental, desenvolvimento de métodos de preparo de amostra e de determinação por espectrofotometria e ICP-MS para nanopartículas em solos e lixiviados. Desenvolvimento de métodos quimiométricos para análise de dados espectrofotométricos. Modelagem de processos de transporte de nanopartículas

2005–2011

Graduação em Química

Instituto de Química, Universidade Nacional de Colômbia

Área trabalho final do curso: química analítica e ambiental, desenvolvimento de métodos FIA-UV-Vis para o análise de metais em água.

extracurricular

2016–2016

Universidade Johns Hopkins no Coursera

Curso de programação em R e curso "The Data Scientist's Toolbox"

Publicações

Exposure of Brazilian soil and groundwater to pollution by coccidiostats and antimicrobial agents used as growth promoters. Science of The Total Environment 2018 | journal-article. DOI: 10.1016/j.scitotenv.2018.06.338

Mobility of polyvinylpyrrolidone coated silver nanoparticles in tropical soils. Chemosphere. 2018 | journal-article. DOI: 10.1016/j.chemosphere.2017.12.019

Sorption of thiabendazole in sub-tropical Brazilian soils. Environmental Science and Pollution Research. 2017 | journal- article. DOI: 10.1007/s11356-017-9226-8

Alejandro Yopasá Arenas

Chemist, Colombian, resident of Brazil, 29 years old.

Education

2015–present **PhD in Analytical Chemistry**, *Universidade Estadual de Campinas, SP, Brazil.*

Pharmaceuticals in soils, transport, biodegradability and risk analysis

Principal achievements:

- Knowledge of analytic chemistry and environmental chemistry of organic compounds, risk analysis in geographical information systems (GIS).
- Experience in the analytical techniques:
 - Chromatography (UPLC-DAD-MS/MS, UHPLC-DAD-FLD)
 - Fluorescence, IR, UV-Vis analysis with multivariate techniques (PARAFAC, 2D-COS) for the study of organic matter and pharmaceuticals interactions
 - Sample preparation (QuEChERS method development assisted by ultrasound) and preconcentration of analytes (SPE, SPE-online)

2013–2015 **Master in Analytical Chemistry**, *Universidade Estadual de Campinas, SP, Brazil.*

Evaluation of the mobility of silver nanoparticles in typical soils of the state of Sao Paulo

Principal achievements:

- Knowledge of analytic chemistry and environmental chemistry of nanoparticles and inorganic compounds, soil quality parameters, contaminant analysis as suggested by OECD and EPA guidelines.
- Proposal of SPR as a technique for the study of the transformations of nanoparticles in soils.
- Experience in the analytical techniques:
 - ICP-MS, ICP-OES, Spectrophotometric methods (Uv-vis, Raman, FTIR)
 - Microwave assisted digestion (MAE)

2005–2011 **Bachelor in Chemistry**, *Universidad Nacional de Colombia, Colombia, .*

Experience

2011–2013 **Analyst**, ANÁLISIS QUÍMICO Y MICROBIOLÓGICO AQM SAS, Bogota, Colombia.

Specialization in sample preparation and analysis using liquid chromatography, spectroscopic and electrochemical techniques in compliance with regulatory issues. Troubleshooting of analytical methods and maintenance of equipment and other laboratory facilities.

Principal achievements/functions:

- Practical skills gained in sample preparation techniques such as solvent extraction and evaporation, acid digestions and enzymatic degradation. Experience in method development and validation using physicochemical and chromatographic (HPLC-UV/RI) methods.
- Skills that allow fluid laboratory management, like effective planning, budgeting, involvement, and effective mentoring and listening of young technicians under my responsibility and other laboratory members.
- Handling of established techniques or new ones, analysis according to established standards (pharmacopoeial methods) and modification of these conforming to the organization needs.
- Participation in the validation and accreditation of laboratories, norms ISO 17025 and ISO 9001.

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2011–2011 **Researcher**, ENVIRONMENTAL CHEMISTRY LABORATORY, CHEMISTRY DEPARTMENT, UNIVERSIDAD NACIONAL DE COLOMBIA, Bogota, Colombia.

Analysis of lead in commercial samples by atomic absorption spectroscopy (FAAS). Analysis of cadmium and mercury in commercial waters by a flow injection analysis (FIA) system coupled to UV-Vis, and data analysis by chemometrics.

Principal achievements:

- Practice in atomic absorption spectroscopy, practical skills in acid digestion of solid samples.
- Knowledge of water quality parameters and physicochemical characterization of contaminated waters.
- Hyphenation of lab-made flow injection systems to commercial instruments, implementation of routines of multivariate analysis (PCA, PLS).

Computer skills

Basic	Python, MATLAB
Intermediate to Advanced	R, L ^A T _E X, OpenOffice, Linux, MS Office, Empower

Communication Skills

- 2018 Oral Presentation at the 2nd Workshop of Veterinary Residues in the Environment, Campinas, Brazil
- 2017 Poster presentation at the VIII National Meeting of Environmental Chemistry, Curitiba, Brazil.
- 2017 Oral and Poster Presentation at the 46th World Chemistry Congress, 40a Reunião Anual da Sociedade Brasileira de Química, and IUPAC 49th General Assembly, Sao Paulo, Brazil
- 2016 Oral Presentation at the 1st Workshop of Veterinary Residues in the Environment, Campinas, Brazil
- 2014 Poster at the 4th Brazilian Meeting on Chemical Speciation, Curitiba, Brazil
- 2011 Poster at the 13th Instrumental Analysis Conference, Barcelona, Spain.

Publications

- 2018 Exposure of Brazilian soil and groundwater to pollution by coccidiostats and antimicrobial agents used as growth promoters. Science of The Total Environment 2018 | journal-article. DOI: 10.1016/j.scitotenv.2018.06.338
- 2018 Mobility of polivinylpyrrolidone coated silver nanoparticles in tropical soils. Chemosphere. 2018 | journal-article. DOI:10.1016/j.chemosphere.2017.12.019
- 2017 Sorption of thiabendazole in sub-tropical Brazilian soils. Environmental Science and Pollution Research. 2017| journal-article. DOI: 10.1007/s11356-017-9226-8

Languages

Spanish	Native	
English	B2	<i>Independent User</i>
Portuguese	C1	<i>Effective operational proficiency</i>

Interests

- Data Science
- Chess
- Painting
- Driving

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