

## **FQM-363 Innovations in Chemical Analysis**

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The “Innovations in Chemical Analysis” research group comprises seven doctors (one Contract Professor, one Ph.D Assistant Professor, one tenured university professor and four full professors), as well as several young researchers in training.

The group has extensive experience in archaeometry and in agrifoods and pharmaceutical analysis through the use of a wide variety of analytical techniques. On one hand, we develop simple rapid-response methods for addressing problems in different fields through non-destructive techniques requiring minimal sample manipulation (IR and Raman), and occasionally portable units for *in situ* chemical analysis. We also develop automated methods for analyzing natural compounds, residues and contaminants in foods, which are simple, quick, low-cost and environmentally friendly, as an alternative to conventional analysis methods. Finally, the group is also working on the application of Gas and Liquid Chromatography techniques coupled to Mass Spectrometry for analytical control of agrichemicals used in the olive oil industry, analysis of chloropropanediols in foods or the characterization of phytochemicals in plant extracts in a search for new sources of antioxidant compounds.

The group has specialized equipment in place, of interest among them a portable X-ray fluorescence spectrometer, NITON XL3T Gold brand.

### **Website for the group**

[Website for the Research Group on Innovations in Chemical Analysis](#)

### **Research lines**

- Automated methods of analysis
- Flow-through optosensors
- Analytical nanotechnology
- Analytical applications of vibrational spectroscopy to archaeometry and cosmetic and agri-food sectors
- Analysis of natural compounds, residues and contaminants through chromatography coupled to mass spectrometry
- Analysis of metals by atomic techniques: ICP-MS and AAS
- Chemometrics

### **Related services and products**

- [Procedure for treating water from washing agricultural products](#)
- [Development, fine-tuning and enhancement of chemical analysis methods](#)
- [Analysis of oils and olives](#)
- [Analysis of foods](#)
- [Analysis of waters](#)
- [Analysis of soils](#)
- [Analysis of drugs and biological fluids](#)
- [Characterization of materials by means of microspectroscopic techniques](#)
- [Scientific-technical advisory service in Chemical Analysis](#)
- [Specialization courses in Chemical Analysis](#)

**Spanish website:** <https://bit.ly/2PRCsQx>