ICP Laboratory
Department of Chemistry
University of Crete
Prof. Spiros A. Pergantis

Website: [www.chemistry.uoc.gr/spergantis](http://www.chemistry.uoc.gr/spergantis)

Types of Analysis offered by the laboratory:

- Silver (Ag) speciation and characterization of Ag nanoparticles released from plastic food containers by single particle ICP-MS (Inductively Coupled Plasma Mass Spectrometry) (Published Methods)

- Determination of Sulphur (S) content in plastic materials using the ICP-OES technique (European Standard, Draft prEN 13206:2015).


- Determination of total cadmium (Cd) in plastic materials (Validated Internal Method)

- Determination of Metals in ground waters, surface waters, industrial waters, sludges and soil samples by using ICP-MS (EPA Method 6020a)

- Determination of As, Pb and Sb in food products and packaging by ICP-MS (Validated Internal Method)

List of Instruments

- NexION 300XX Inductively Coupled Plasma Mass Spectrometer (Perkin Elmer)
- Series 2 Inductively Coupled Plasma Mass Spectrometer (Thermo Scientific)
- iCAP 6000 series Inductively Coupled Plasma Optical Emission Spectrometer (Thermo Scientific)
- Microwave Digestion System (Berghof)
- TSI Differential Mobility Analyser for nanoparticle detection
- LCQ Advantage Ion Trap Mass Spectrometer (Thermo Scientific)
- TSQ Quantum Triple Quadrupole Mass Spectrometer (Thermo Scientific)
- Numerous HPLC systems (Thermo Scientific, Schimadzu, Agilent, Perkin Elmer)
Instruments Photos

NexION 300XX Inductively Coupled Plasma Mass Spectrometer (Perkin Elmer)

iCAP 6000 series Inductively Coupled Plasma Optical Emission Spectrometer (Thermo Scientific)

TSQ Quantum Triple Quadrupole Mass Spectrometer (Thermo Scientific)

LCQ Advantage Ion Trap Mass Spectrometer (Thermo Scientific)

TSI Differential Mobility Analyzer CPC detector

Microwave Digestion System (Berghof)

TSI Differential Mobility Analyzer with ICP-MS
Funding to ICP Laboratory

Project Title: Development of Advanced Mass Spectrometric Techniques for Detecting Metalloproteomes, Studying their Structure and their Interactions
Period: 2012-15 Duration: 36 months
Programme: SYNERGASIA (Cooperation)
Funding Source: General Secretariat for Research and Technology (GSRT), Ministry of Education, Greece
Principal Investigator: S. A. Pergantis
Funding: Total funding for 3 partners: 607,125 €
Funding for S. Pergantis group: 221,000 €

Project Title: Easy Ambient Sonic Spray Ionization – Mass Spectrometry
Period: 2011-12 Duration: 24 months
Programme: Small Research Grants, University of Crete, Special Account for Research
Funding Source: University of Crete, Special Account for Research
Principal Investigator: S. A. Pergantis
Funding: 2,500 €

Project Title: Development of Ion Mobility Spectrometry for the Determination of Size and Composition of Nanoparticles
Period: 2010-13 Duration: 36 months
Programme: HRAKLEITOS II
Funding for a PhD studentship
Funding Source: Ministry of Education, Greece
Principal Investigator: S. A. Pergantis (PhD fellowship for E. Kapellios)
Funding: 30,000 €

Project Title: Development, Evaluation and Application of Hydrodynamic Chromatography On-line with ICP-MS for the Detection of Manufactured Metal-containing Nanoparticles in Environmental Matrices
Period: 2010-11 Duration: 9 months
Programme: United States National Research Council Resident Senior Research Associateship Award
Funding Source: US National Research Council
Principal Investigator: S. A. Pergantis
Funding: $ 75,000

Project Title: Development of Novel Carbon Nanotube Assisted Mass Spectrometric Techniques for the Determination of Ultra-trace levels of Metals
Period: 2007-08 Duration: 24 months
Programme: Research Grant Programme, University of Crete, Special Account for Research
Funding Source: University of Crete, Special Account for Research
Principal Investigator: S. A. Pergantis
Funding: 5,000 €

**Project Title: Development and Application of Analytical Mass Spectrometric Techniques for the Determination of Selenium Species in Food Products**
Period: 2005-07 Duration: 36 months
Programme: PYTHAGORAS II
Funding Source: Greek Ministry of Education
Principal Investigator: S. A. Pergantis
Funding: 50,000 €

**Project Title: Development of Advanced Analytical Method for Determining Metal Species and Their Interactions in Environmental and Biological Systems (ACE-METALS)**
Period: 2004-08 Duration: 48 months
Programme: Marie Curie Excellence Grant (MEXT-CT-2003-2788), FP6
Funding Source: European Commission
Principal Investigator: S. A. Pergantis
Funding: 857,321 €

**Selected ICP Laboratory Publications in International Peer Reviewed Journals**


For further information contact:
Prof. Spiros A. Pergantis
e-mail: spergantis@uoc.gr
Tel. 2810 545084