

Laboratory of Aquatic Chemistry

- **Director: Professor Elia Psillakis**
Telephone: +30 2821037806, 37810 **Fax:** +30 28210 846
E-Mail: elia@enveng.tuc.gr

- **Staff:**

Name	Title	E-MAIL
Kalliopi Antelli	Teaching staff	antelli@mred.tuc.gr
Nicoleta Solomou	PhD Candidate	nicoletasolwmou@hotmail.com
Niki Koutela	MSc candidate	nkoutela@isc.tuc.gr
Sofia-Maria Mela	UG candidate	www.sophmarmela@gmail.com
Anastasia Liakata	UG candidate	aliakata94@gmail.com

- **Research activities**

Current research activities mainly focus on

- Understanding, developing and applying novel analytical procedures for detecting trace amounts of organic pollutants in a variety of environmental or engineered samples
- Studying the fate of organic pollutants in natural and engineered environments

- **Lab infrastructure**

Gas Chromatography (GC) facilities

GC-Ion Trap Mass spectrometer (GC-IT-MS)

Varian 450-GC, Varian 220-MS, Varian

GC-Mass Spectrometer (GC-MS)

GC17A, QP5050A Shimadzu

GC-Electron Capture Detector-Flame Ionization Detector (GC-ECD/FID)

GC17A, Shimadzu

Liquid Chromatography (LC) facilities

LC-Mass Spectrometry (LC-MS)

Agilent 1200 Series HPLC system (binary pump, autosampler, degasser, thermostatted column compartment and photodiode array (PDA)) - Agilent 6100 Series Quadrupole

HPLC-PDA-Fluorescence detectors (HPLC-PDA-FLU)

CTO10AC, SPD-M10A, RF-10AxL, with Autosampler, Shimadzu

Sample Preparation

Solid-Phase Microextraction

Headspace and Direct Immersion SPME

Vacuum Assisted Headspace SPME

Liquid Phase Microextraction (LPME)

Hollow-Fiber LPME

Single Drop Microextraction

Vortex-Assisted Liquid-Liquid Microextraction

Ultrasound-Assisted Emulsification Microextraction

Environmental Fate

Photosimulator Suntest CPS (Atlas Material Testing Solutions) equipped with Xenon arc lamp 1500W

Two photoreactors equipped with low-pressure mercury lamps (8–10 W, 254 nm)

General equipment

Ultrasonic bath, vortex agitator, Magnetic stir bar plates with temperature control option, incubator, fridges, weighting scales, multimeter (conductivity, DO, pH, TDS and temperature), centrifuges.

○ **Research projects**

1. Leaching of chemicals of environmental concern from used heated tobacco sticks to natural water and comparison with leaching from smoked conventional cigarettes, Role: Coordinator; Funding Source: PMI Science; Budget: € 99533; Duration: 2018-2020.
2. European network for the promotion of portable, affordable and simple analytical platforms, PortASAP; COST Action CA16215; Role: Work-group Leader; MC Member; Funding Source: COST Association; Budget: € 450000/year; Duration: 2017-2021.
3. New biotechnological approaches for biodegrading and promoting the environmental biotransformation of synthetic polymeric materials. Role: Research Collaborator; Funding Source: FP7-KBBE; Budget: € 4000000; Duration: 2012-2015.