

► Marios Kostakis

Postdoctoral Researcher at University of Athens
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Education

B.Sc. in Chemistry (2005-2009), University of Athens, Grade: 8.12/10

M.Sc. in Chemical Analysis & Quality Control (2009-2012), University of Athens, Grade 9.12/10

Ph.D. in Analytical Chemistry (2013-2019), University of Athens

Certifications

Certified Trainer:

- EFET (Hellenic Food Authority) Reg No: 30318611133
- LAEK-OAED (Manpower Employment Organisation)
- EOPPEP (National Organisation for the Certification of Qualifications & Vocational Guidance) Reg No: EB32951

Certified Internal Auditor:

- ISO 17025:2005
- ISO 22000:2005
- ISO 9001:2015

Research Topics

Undergraduate Thesis: “Method development and validation for the determination of hexavalent chromium in water with liquid-liquid extraction and Electrothermal Atomic Absorption Spectrometry Laboratory of Analytical Chemistry, Chemistry department, University of Athens, Greece.

Master Thesis: “Development and validation of method for the determination of hexavalent chromium in food and soil”, Laboratory of Analytical Chemistry, Chemistry department, University of Athens, Greece.

Ph.D. Thesis: “Development of methods for determination and identification of chemical freshness indices with mass spectrometry techniques”, Laboratory of Analytical Chemistry, Chemistry department, University of Athens, Greece.

Research Interests

General research interests:

- Method Development
- Method Validation, uncertainty in analytical measurements
- Atomic Absorption Spectrometry & Atomic Emission Spectrometry

- Reversed Phase Liquid Chromatography (RP-LC) and Hydrophilic interaction chromatography (HILIC)
- Gas Chromatography
- Mass Spectrometry
- Quality Assurance in Analytical Chemistry & ISO 17025

Projects:

- 2009-today: **Service Laboratory “Chemical Analysis – Quality Control”**, Research and Development, Quality Manager, Accredited Analyst according to ISO 17025
- 2013-2015: **General Secretariat for Research and Technology**, Project: Identification of chemical and microbiological indices for seafood freshness and their implementation for the establishment of freshly-frozen claim.

Publications in journals

- M. G. Kostakis, I. N. Pasias, V. L. Borova, A. K. Panara, N. S. Thomaidis “Comparative Study of two different speciation methods for the determination of hexavalent chromium in water samples using electrothermal atomic absorption spectrometry” *Current Analytical Chemistry*, **2013**, 288-295 (doi: 10.2174/1573411011309020013).
- S. Stasinou, M. Kostakis, N. Thomaidis, I. Zambetakis “Irrigating Onions and Potatoes with Chromium and Nickel: Its Effects on Catalase and Peroxidase Activities and the Cross-Contamination of Plants” *Water, Air, & Soil Pollution*, **2014**, 2142 (doi: 10.1007/s1127).
- V. Stoikou, V. Andrianos, S. Stasinou, M. Kostakis, S. Attiti, N. Thomaidis, I. Zabetakis, “Metal Uptake by Sunflower (*Helianthus annuus*) Irrigated with Water Polluted with Chromium and Nickel” *Foods*, **2017**, 1-14 (doi: 10.3390/foods6070051).
- M. Logotheti, K. Theochari, M. Kostakis, I. Pasias, N. Thomaidis “Development and validation of a HILIC-UV method for the determination of nucleotides in fish samples” *Food Chemistry*, **2018**, 70-77 (doi: 10.1016/j.foodchem.2017.12.040).
- P. Michopoulos, A. Bourletsikas, K. Kaoukis, E. Daskalaku, G. Karetos, M. Kostakis, N. Thomaidis, I. Pasias, “The distribution and variability of heavy metals in a mountainous fir forest ecosystem in two hydrological years” *Global Nest Journal*, **2018**, 188-197.
- K. Pasvanka, A. Tzachristas, M. Kostakis, N. Thomaidis, Ch. Proestos, “Geographic characterization of Greek wine by inductively coupled plasma–mass spectrometry macroelemental analysis” *Analytical Letters*, **2019**, (doi: 10.1080/00032719.2019.1596118).

Conferences Presentations

- **Kostakis M. G.**, Borova VL., Panara A.K., Pasias I.N., Thomaidis N. S., " Development, validation and comparison of method for the determination of Hexavalent chromium in water with graphite furnace Atomic Absorption Spectrometry (ETAAS)", Workshop of postgraduate students in Chemistry of National and Kapodistrian University of Athens, Athens, **2010** in *Greek* (oral presentation).
- **Kostakis M. G.**, Borova VL., Panara A.K., Pasias I.N., Thomaidis N. S., " Comparison of two different speciation methods for the determination of hexavalent chromium in water samples by ETAAS ", 7th Aegean Analytical Chemistry Days, Lesvos, **2010** (poster presentation).
- **Marios Kostakis**, Michael A. Koupparis, Nikolaos S. Thomaidis, “Comparison of GUM-EURACHEM uncertainty approach with MONTE-CARLO approach in determination of hexavalent chromium in water”, 5th National Congress in Metrology, Athens, **2012**, in *Greek* (oral presentation)
- **M. G. Kostakis**, M. E. Dasenaki, C. E. Efstathiou and N. S. Thomaidis, “Determination of biogenic and volatile amines in fish by Hydrophilic Interaction Liquid Chromatography - Tandem Mass Spectrometry”, 8th International Conference on Instrumental Methods of

- Analysis Modern Trends and Applications, Thessaloniki, **2014** (poster presentation).
- **M. G. Kostakis**, C. E. Efstathiou and N. S. Thomaidis, "Method development for the determination of biogenic and volatile amines in fish by Hydrophilic Interaction Liquid Chromatography - Tandem Mass Spectrometry", 6th International Symposium on Recent Advances in Food Analysis, Prague, **2013** (poster presentation).
 - **M. G. Kostakis**, C. E. Efstathiou, M. A. Koupparis and N. S. Thomaidis, "Alternative ways for calculation of systematic error", 4th National Congress in Metrology, Athens, **2014**, *in Greek* (oral presentation).
 - P. Michopoulos, **M. Kostakis**, T. Grigoratos, N. S. Thomaidis, C. Samara, I. N. Pasiadis, "Comparison of total analysis of trace elements in soils through X-Ray Fluorescence Spectrometry (XRF) and digestion with hydrofluoric acid and determination with ICP-MS", 9th Aegean Analytical Chemistry Days, Chios, **2014** (poster presentation).
 - **M. Kostakis**, I. Pasiadis, R. Aalizadeh, N. Alygizakis, C. Efstathiou and N. Thomaidis, Targeted and untargeted LC-MS metabolic profiling for proving the "freshly-frozen" claim in fish, 7th International Symposium on Recent Advances in Food Analysis, Prague, **2015** (poster presentation).
 - **G. Soutani**, E. Stathopoulou, M. Kostakis, N. Thomaidis, M. Scoullou, C. Jacobsen, J. J. Sloth, "Determination of fatty acids and trace elements in muscles and cephalothoraxes of a Mediterranean red shrimp", 9th International Conference on Instrumental Methods of Analysis: Modern Trends and Applications, Kalamata, **2015** (poster presentation).
 - **Marios Kostakis**, Michael A. Koupparis, Nikolaos S. Thomaidis, "ANOVA: A TOOL FOR BETTER EXPERIMENTAL DESIGN AND EVALUATION OF METHOD VALIDATION", Eurachem Workshop: Method Validation - Current Practices and Future Challenges, Ghent, **2016** (poster presentation, **awarded**).
 - **Marios Kostakis**, Michael A. Koupparis, Nikolaos S. Thomaidis, "Linearity: Review and new approaches", 6th National Congress in Metrology, Athens, **2016**, *in Greek* (oral presentation)
 - **Marios Kostakis**, Nikolaos S. Thomaidis, "Qualitative uncertainty (reliability) of chemical identification with High Resolution Mass Spectrometry", Eurachem Workshop: Uncertainty in Qualitative and Quantitative Analysis, Cyprus, **2017** (poster presentation).
 - **Marios Kostakis**, Reza Aalizadeh, Marilena Dasenaki, Nikolaos Thomaidis "Exploring data quality of multivariate HRMS data in food authenticity research, Eurachem Workshop: Uncertainty in Qualitative and Quantitative Analysis", Dublin, **2018** (poster presentation, **awarded**).
 - **M. Kostakis**, A. Panara, G. Gkotsis, R. Aalizadeh, N. Thomaidis, "Metabolic Fingerprint of Sideritis Scardica by a Novel LC-QTOF-MS Workflow", 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation).
 - K. Pasvanka, A. Tzachristas, **M. Kostakis**, N. Thomaidis, Ch. Proestos, "Geographical Origin Identification of Greek Wines by ICP-MS Elemental Analysis", 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation).
 - A. Panara, **M. Kostakis**, G. Gkotsis, R. Aalizadeh, N. Thomaidis, "Characterization of Chemical Profile of Pelargonium Sidoides Rhizome Using LC-QTOF/MS", 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation).
 - MC. Nika, D. Damalas, G. Koulis, N. Alygizakis, V. Nikolopoulou, S. Drakopoulou, A. Psoma, **M. Kostakis**, R. Aalizadeh, P. Oswald, J. Slobodnik, N. Thomaidis, "Extended Monitoring of Legacy Pollutants and Emerging Contaminants in the Marine Environment of Black Sea", 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation, **awarded**).
 - D. Kanakis, I. Martakos, **M. Kostakis**, N. Kalogiouri, M. Pentogennis, N. Thomaidis, "Development of Method for Determination of 1,2 Diacylglycerols in Extra Virgin Olive Oil with GCMS/MS", 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation).

- I. Martakos, D. Kanakis, **M. Kostakis**, N. Kalogiouri, M. Pentogennis, N. Thomaidis, “Development and Comparison of Two HPLC-DAD Methodologies for the Analysis of Extra Virgin Olive Oil’s Quality Characteristics”, 11th Aegean Analytical Chemistry Days, Chania, **2018** (poster presentation).

Awards and Honors

- Poster Award, poster presentation at Eurachem Workshop: Method Validation - Current Practices and Future Challenges, Ghent, 2016.
- Poster Award, poster presentation at the Eurachem Workshop: Uncertainty in Qualitative and Quantitative Analysis”, Dublin, 2018.
- Poster Award, poster presentation at the 11th Aegean Analytical Chemistry Days, Chania, **2018**.
- Scholarship for Master studies, Onassis Foundation, 2010-2011.

Professional Affiliations

- Association of Greek Chemists, 2009-Present
- Hellenic Mass Spectrometry Society, 2012-Present
- Member of EURACHEM Working Group for Method Validation, 2019-present

Contact information

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