



▶ Martakos Ioannis

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Education

B.Sc. in Chemistry (2011-2017), University of Athens

M.Sc. in Chemical Analysis & Quality Control (2017-2019), University of Athens

Ph.D. in Analytical Chemistry (2019-present), National and Kapodistrian University of Athens

Research Topics

Undergraduate Thesis: “Study of Phenolic imprint of Olive Oils based on geographical altitude by UHPLC-QTOF-MS”.

Master Thesis: “Development and Validation of a method for the simultaneous determination of pigments, tocopherols and squalene in olive oil with the technique of HPLC-DAD.

PhD Thesis: “Chemical Characterization and Identification of new Bioactive Compounds in Food and Food by-products by High Resolution Mass Spectrometry and Advanced Chemometric Techniques”

Research Interests

General research interests: Method Development, Sample preparation techniques (solid phase extraction), Reversed Phase-Liquid Chromatography (RP-LC) Food Authenticity, Food Metabolomics, High Resolution Mass Spectrometry (HRMS), Mass Spectrometric Detection, Separation Techniques and Mass Spectrometry, Olive Oil and Derivatives, Environmental Analysis, Lipidomics, Foodomics

Projects:

2018 –2020: Emblematic action - The Olive Road (funding: Ministry of Education)

2018 –2021: Novel wide-scope research for the promotion of N. Aegean olive oil and olive products through the designation of their unique characteristics and bioactive content (funding: Prefecture of North Aegean)

2019-2021: **ELAION** – Study and Exploitation of olive oil as innovative raw material for special industrial applications to baby food products

2020-present: **Omega 3-Nutricare** – Research and development of high nutritional value anti-inflammatory functional foods, enriched in n-3 fatty acids sourced from Greek fisheries and farming byproducts.

Professional Affiliations

Association of Greek Chemists, 2017-present

Publications in journals and books

- Martakos, Ioannis C. & Kostakis, Marios & Dasenaki, Marilena & Thomaidis, Nikolaos. (2022). Authenticity and Chemometrics of Olive Oil, in “Chemometrics and Authenticity of Foods of Plant Origin”, pp 36-55
- Martakos, I.; Katsianou, P.; Koulis, G.; Efstratiou, E.; Nastou, E.; Nikas, S.; Dasenaki, M.; Pentogennis, M.; Thomaidis, N. Development of Analytical Strategies for the Determination of Olive Fruit Bioactive Compounds Using UPLC-HRMS and HPLC-DAD. Chemical Characterization of Kolovi Lesvos Variety as a Case Study. *Molecules* **2021**, 26, 7182. [PDF]
- Natasa P. Kalogiouri, Evangelia Kritikou, Ioannis C. Martakos, Constantina Lazarou, Michalis Pentogennis and Nikolaos S. Thomaidis. Characterization of the phenolic fingerprint of Kolovi extra virgin olive oils from Lesvos with regard to altitude and farming system analyzed by UHPLC-QTOF-MS. *Molecules*, **2021**, 26, 5634 [PDF].
- Koulis, Georgios & Tsagkaris, Aristeidis & Katsianou, Panagiota & Gialouris, Panagiotis-Loukas & Martakos, Ioannis C. & Stergiou, Fotis & Fiore, Alberto & Panagopoulou, Eleni & Karabournioti, Sofia & Baessmann, Carsten & Borg, Noud & Dasenaki, Marilena & Proestos, Charalampos & Thomaidis, Nikolaos. (2022). Thorough Investigation of the Phenolic Profile of Reputable Greek Honey Varieties: Varietal Discrimination and Floral Markers Identification Using Liquid Chromatography-High-Resolution Mass Spectrometry. *Molecules*. 27. 4444. 10.3390/molecules27144444.
- Mitsou, Evgenia & Theochari, Ioanna & Gad, Elpida & Vassiliadi, Evdokia & Karpenisioti, Evdoxia & Koulis, Georgios & Martakos, Ioannis C. & Pissaridi, Katerina & Thomaidis, Nikolaos & Xenakis, Aristotelis & Zoumpanioti, Maria. (2022). Enzymatic Modification of Triglycerides in Conventional and Surfactant-free Microemulsions and In Olive Oil. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 647.129170. 10.1016/j.colsurfa.2022.129170.
- Evangelia Kritikou, Natasa P. Kalogiouri, Marios Kostakis, Dimitrios-Christos Kanakis, Ioannis Martakos, Constantina Lazarou, Michalis Pentogennis and Nikolaos S. Thomaidis. Geographical Characterization of Olive Oils from the North Aegean Region Based on the Analysis of Biophenols with UHPLC-QTOF-MS. *Foods*, **2021**, 10, 2102 [PDF]
- Aristeidis S. Tsagkaris, Georgios A. Koulis, Georgios P. Danezis, Ioannis Martakos, Marilena Dasenaki, Constantinos A. Georgiou, Nikolaos S. Thomaidis, “Honey authenticity: analytical techniques, state of the art and challenges”, *RSC Advances*, **2021**, 11, 11273 [PDF]
- Dasenaki, M.E.; Drakopoulou, S.K.; Katsianou, P.A.; Martakos, I.C.; Thomaidis, N.S. Authentication of Olive Products with Liquid Chromatographic Techniques. *In*

Chromatographic and Related Separation Techniques in Food Integrity and Authenticity, 10.1142/9781786349972_0003 pp. 43-94 **[PDF]**

- Ioannis Martakos, Marios Kostakis, Marilena Dasenaki, Michalis Pentogennis, Nikolaos Thomaidis. Simultaneous Determination of Pigments, Tocopherols, and Squalene in Greek Olive Oils: A Study of the Influence of Cultivation and Oil-Production Parameters” *Foods*, **2020**, 9, 31 **[PDF]**

Conference Presentations

- Ioannis Martakos, Ilias Tzavellas, Marilena Dasenaki, Ioannis Skoufos, Athina Tzora, Charalampos Proestos, Nikolaos Thomaidis, “Untargeted 4D Lipidomics combined with Chemometrics, as a reliable tool for the classification of pork meat cuts”, 10th Greek Lipid Forum, November 25, 2022, Athens, Greece (oral presentation)
- Ioannis Martakos, Ilias Tzavellas, Marilena Dasenaki, Ioannis Skoufos, Athina Tzora, Charalampos Proestos, Nikolaos Thomaidis, “Untargeted 4D Lipidomics combined with Chemometrics, as a reliable tool for the classification of pork meat cuts”, 10th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS, September 6–9, 2022, Prague, Czech Republic
- Ilias Tzavellas, Ioannis Martakos, Ioannis Skoufos, Athina Tzora, Marilena Dasenaki, Evangelos Gikas, Nikolaos Thomaidis, “Classification of Poultry Meat Cuts Based on Approach of Untargeted Lipidomic Analysis and Advanced Chemometrics”, 10th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS, September 6–9, 2022, Prague, Czech Republic
- Aikaterini Voudouri, Ioannis Martakos, Nikolaos Thomaidis and Marilena Dasenaki. “Method Development and Validation for The Determination of Phytosterols in Edible Oils”, Athens Conference on Advances in Chemistry (acac2022)”, June 26 – July 1, 2022
- Georgios A. Koulis, Panagiota A. Katsianou, Ioannis Martakos, Panagiotis-Loukas Gialouris, Aalizadeh Reza, Marilena E. Dasenaki, Charalampos Proestos, Nikolaos S.Thomaidis, Carsten Baessman, Botanical Type Discrimination Of Well-Known Greek Honey Varieties By Targeted And Untargeted Metabolomics Making Use of UPLC-QToF MS. 69th ASMS, Pennsylvania Conference Centre, Philadelphia, USA 31 October – 4 November **2021**.
- Ioannis Martakos, Dimitris Kanakis, Marios Kostakis, Natasa P. Kalogiouri, Michalis Pentogennis, Nikolaos S. 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, AACD 2018, Chania, Crete, Greece, 25-29 Sept 2018
- "Development of Method for Determination of 1.2 Diacylglycerols in Extra Virgin Olive Oil with GC- MS/MS", Dimitris Kanakis, Ioannis Martakos, Marios Kostakis, Natasa P. Kalogiouri, Michalis Pentogennis, Nikolaos S. Thomaidis,

11th Aegean Analytical Chemistry Days (AACD 2018), 25-29 Sept 2018 Chania,
Crete, Greece.

Contact information

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Greece

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