

Katsouli Maria

Chemical Engineer, PhD

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Date of Birth: 07/05/1990

Linguistic abilities: English (CPE Cambridge & ECPE Michigan) and French (DELF 2nd degré (Dalf C1))

Computer skills: Windows, MS Office, MS Project, Statistica, Anova

Lab skills: Basic Analytical Techniques, Classic Chemical Analysis, Microbiological Analysis, Extraction, Ultraviolet-visible (UV-Vis) spectrophotometry, Fourier Transform Infrared (FT-IR) Spectroscopy, High-performance liquid chromatography (HPLC), Dynamic Light Scattering (DLS), Surface Tension Analysis, Oxitest, Texture Analysis, Rheological Analysis, Colorimetry.

Additional skills: Trained sensory panelists for sensory evaluation of food in the laboratory of the School of Chemical Engineers, "Sensory analysis in food assurance", National Technical University of Athens (NTUA)

SHORT DESCRIPTION – PROFESSIONAL EXPERIENCE

Dr. Maria Katsouli has a diploma degree and a PhD in Chemical Engineering (NTUA, 2020). Her principal research interests lie in the field of encapsulation in particular nanoemulsion and colloidal systems, extraction techniques, oil and lipid analysis, bioactive compounds and functional foods, modelling of food quality, food packaging and shelf-life. She participates actively in European and national research projects as well as in R&D projects funded by the Greek Food Industry. The courses in which she participates are: Chemistry, Microbiology and Food Preservation Principles, Food Engineering and Food Industries Design - Food Quality and Safety. She has a long experience on Food technology and in analytical and instrumental techniques of analysis: Basic Analytical Techniques, Classic Chemical Analysis, Microbiological Analysis, Extraction, Ultraviolet-visible (UV-Vis) spectrophotometry, Fourier Transform Infrared (FT-IR) Spectroscopy, High-performance liquid chromatography (HPLC), Dynamic Light Scattering (DLS), Surface Tension Analysis, Oxitest, Texture Analysis, Rheological Analysis, Colorimetry. She is a trained sensory panelist for sensory evaluation of food in the laboratory of the School of Chemical Engineers, "Sensory analysis in food assurance", National Technical University of Athens (NTUA). Results of her research have been published in 14 peer reviewed journals, 3 book chapters and more than 24 scientific conference proceedings.

WORK EXPERIENCE

10/2020 – today	Junior Researcher at the Laboratory of Food Science and Technology at the National Technical University of Athens, School of Chemical Engineering.
10/2022 – 2/2023	Teaching Lab Fellowship - University of West Attica
7/2019 –12/2021	Freelancer - Advisory assistance for the development of new food products for the company Lelia Foods S.A
12/2018 –2020	Freelancer - Advisory assistance for the development of new food products for the company Melissi & Co (Ladolea Olive oil)
6/2015 – 7/2020	Laboratory and Research Associate at the Laboratory of Food Science and Technology at the National Technical University of Athens, School of Chemical Engineering.

TEACHING EXPERIENCE

2017-2020	<i>Laboratory Associate</i> in the laboratory courses of 8 th - 9 th - 10 th semester in the Laboratory of Food Science and Technology of the School of Chemical Engineering
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EDUCATION-CERTIFICATIONS

6/2015 – 7/2020	PhD in Nanoemulsions and colloidal systems , National Technical University of Athens (NTUA), School of Chemical Engineers Thesis: « Preparation of double nanoemulsions and evaluation of their Stability assessment during refrigerated storage »
9/2009 – 2/2015	National Technical University of Athens Diploma of Chemical Engineer « Nanoemulsions based on olive oil with incorporated bioactive compounds »

PUBLISHED RESEARCH PAPERS

«Active and intelligent packaging for enhancing modified atmospheres and monitoring quality and shelf life of packed gilthead seabream fillets at isothermal and variable temperature conditions», M. Katsouli, I. Semenoglou, E. Gogou, M Kotsiri, T. Tsironi, P. Taoukis, *Foods* (accepted).

«Development and characterization of o/w and w/o nanoemulsions based on extra virgin olive and olive pomace oil: Impact of dispersed phase volume and surface-active phenolic acids» M. Katsouli, S.-A. Papatheodorou, V. Giannou, C. Tzia, (2021), *Journal of Food Process Engineering*.

«Novel Processes for the Extraction of Phenolic Compounds from Olive Pomace and Their Protection by Encapsulation», S. Chanioti, M. Katsouli & C. Tzia (2021), *Molecules* 26(6):1781, DOI: 10.3390/molecules26061781

«Identification, Quantification and Characterization of Tomato processing by-products», Chapter 1, In: *Tomato Processing by-products*. G. Liadakis, S. Chanioti, M. Katsouli, V. Giannou, & C. Tzia., Ed. by A. Zorpas, Elsevier Inc.

«Novel encapsulation approach for *Bifidobacterium subsp. Lactis (BB-12)* viability enhancement through its incorporation into a double emulsion prior to the extrusion process», G. Frakolaki, M. Katsouli, V. Giannou & C. Tzia (2020). *LWT*, <https://doi:10.1016/j.lwt.2020.109671>

«β-Sitosterol as a functional bioactive component: Physicochemical, nutritional, biological properties and its applications in food systems», in *A Centum of valuable plant Bioactives*, S. Chanioti, M. Katsouli & C. Tzia (2020), Elsevier.

«Enhancement of physicochemical and encapsulation stability of O₁/W/O₂ multiple nanoemulsions loaded with coenzyme Q10 or conjugated linoleic acid by incorporating polyphenolic extract», M. Katsouli, V. Giannou & C. Tzia (2020). *Food & Function*, 11(10), 8878-8892

«Sensory Science and its perceptual properties», Chapter 14 in: «Natural flavours, fragrances and perfumes: Chemistry, production and sensory approach». C. Tzia, V. Giannou, T. Kekes, C. Chranioti, & M. Katsouli, Ed. by Sabu Thomas, Sreeraj Gopi, Nimisha Pulikkal Sukumaran and Joby Jacob, Wiley-VCH Verlag.

«Comparison study for the recovery of bioactive compounds from *Tribulus terrestris*, *Panax ginseng*, *Gingko biloba*, *Lepidium meyenii*, *Turnera diffusa* and *Withania somnifera* by using microwave-assisted, ultrasound-assisted and conventional extraction methods», C. Tsaltaki, M. Katsouli, T. Kekes, S. Chanioti, & C. Tzia, (2019), *Industrial Crops and Products*, 142, 111875.

«Effect of lipid type, dispersed phase volume fraction and emulsifier on the physicochemical properties of nanoemulsions fortified with conjugated linoleic acid (CLA): Process optimization and stability assessment during storage conditions» M. Katsouli, C. Tzia, (2019), *Journal of Molecular Liquids*, 292, 111397

«Development and Stability Assessment of Coenzyme Q10-Loaded Oil-in-Water Nanoemulsions Using as Carrier Oil: Extra Virgin Olive and Olive-Pomace Oil», M. Katsouli, C. Tzia, *Food and Bioprocess Technology (FaBT)*, 2018, <https://doi:10.1007/s11947-018-2193-3>.

«Comparative study of o/w nano-emulsions using extra virgin olive or olive-pomace oil - impact on formation and stability», M. Katsouli, V. Giannou, C. Tzia, (2018), *JAACS*, <https://10.1002/aocs.12091>.

«Influence of surface-active phenolic acids and aqueous phase ratio on w/o nano-emulsions properties; model fitting and prediction of nanoemulsions oxidation stability», M. Katsouli V. Polychniatou, C. Tzia, (2017), *Journal of Food Engineering*, 214, 40-46, <https://doi.org/10.1016/j.jfoodeng.2017.06.017>.

«Optimization of water in olive oil nano-emulsions composition with bioactive compounds by response surface methodology», M. Katsouli, V. Polychniatou, C. Tzia, (2017), *LWT*, 89, 740-748.