

İsmail Emir AKYILDIZ, PhD

Working Group: Authenticity and Characterization of Bee Products

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İsmail Emir Akyıldız graduated from Balıkesir University Faculty of Science in Türkiye as a chemist in 2008 and completed his MSc. in Marmara University, Department of Analytical Chemistry in 2017. He received his PhD from the same department in 2023. Between 2009 and 2015, he worked at Dolunay Technical Instruments as a Biotechnology Application Specialist, and between 2015 and 2017, he served as Analytical Method Development Executive at Pronitron Analytics. Since 2017, he has been working as the Analytical R&D Manager at Balparmak R&D Center.

He has 15+ years of analytical chemistry experience in analytical method research and development, method applications, and method transfers encompassing targeted and non-targeted / discovery analysis approaches for low and high MW compounds. To date, he published more than 10 articles in SCI-indexed journals, submitted more than 60 oral and poster presentations in proceedings, and has participated in more than 20 international and national scientific research projects.

His research interests include food analyses, separation techniques, multi-omic research (LC & GC based metabolomic, proteomic, lipidomic, foodomic, etc.), analytical method validation & uncertainty, deploying chemometric design of experiments (DoE), and analytical assay development.

He has proficiency in separation science applications & downstream assays and always motivated to apply analytical techniques and expertise developed through past and present experiences in therapeutic drug monitoring, biotherapeutic characterization and quantitation in biological matrices, protein analysis (separation, fractionation, annotation), food safety methods (residue analysis, authenticity tests and non-targeted principle component identifications, food-fraud methods), *in-vitro* diagnostic assays, molecular identification and biomarker discovery workflows, bioanalytical & bioseparation applications, protein & enzyme Purification utilizing AC-AEX-CEX-SEC-RP-HIC-HILIC modes.

He is skillful in the operation and maintenance of Chromatography & Spectroscopy and Electrophoresis techniques and instruments: HPLC / UHPLC / FPLC (UV, PDA, RID, Conductivity, FL, ECD), ICP-MS, GC (FID, ECD, MS), LC-MS, UPLC-MS/MS, EA-IR-MS, AAS, Ion Chromatography (IC), ELISA, High-resolution MS Systems, UV-Vis - fluorescence spectroscopy techniques, Gel-based analyses (SDS / Native (BN) / Tris-Tricine-PAGE, Western Blotting and 2D-Gel-Electrophoresis), Automated Sample Preparation Systems.