

Special Issue on
**Smart Approaches for Sensitive and Selective
Determination of Trace Contaminants**

CALL FOR PAPERS

One of the major aims of analytical chemistry is selectivity. This is of overwhelming importance in the case of complex matrices, especially environmental, biological, pharmaceutical, and food samples, wherein trace quantification is usually required with high sensitivity and accuracy. In view of the widespread use of chemicals and their potential adverse effects on humans and wildlife (also at trace levels), working analytical methods for their rapid, sensitive, and selective determination are increasingly required.

Residuals of drugs and harmful xenobiotic compounds need to be constantly monitored in the environment and the food chain, and a continuous sensitivity improvement must be pursued. Counterfeit and unapproved pharmaceutical products pose a significant public health risk and have the potential to cause serious medical complications including death. In the drug lifecycle, drug impurity profiling plays a key role in assuring the safety and efficacy of a dosage form; thus the quality control of active pharmaceutical ingredients is a prerequisite for the safe use of drug products.

Noteworthy advances have been reached in the last years in the field of separation science, with regard to selective extraction, cleanup, enrichment, sample throughput, and chromatographic separations. Despite this, new performing analytical methods, further optimization of the available ones, and selectivity improvement in sample preparation seem to be strongly required now to enhance sample throughput and to achieve detection limits that meet the trigger concentration limits fixed by the worldwide legislations.

We invite submission of original papers reporting on significant advances in the sample preparation, in particular regarding determination of harmful/banned compounds in matrices of high analytical complexity. Papers describing new analytical procedures even developed by multivariate strategies aimed at rapid, sensitive, and selective determination are particularly encouraged. Critical review articles concisely describing the current state of the art and highlighting the key results are also welcome.

Potential topics include but are not limited to the following:

- Determination of residual drugs and personal care products in food, biological, pharmaceutical, and environmental samples
- Preparation of new sorbent materials and application to sample preparation
- Development of (selective) extraction, cleanup, and enrichment procedures
- Extraction techniques application: MAE, SPE, online SPE, d-SPE, MSPE, and SPME
- Multivariate strategies in the optimization of sample preparation procedures
- Chromatographic applications (GC, CE, and LC)
- Analytical Quality by Design in pharmaceutical quality assurance
- Investigation of intermolecular affinities, complexation, and separation mechanism
- Characterization of samples by chemometric approach
- Impurity profiling and enantioseparation of drugs

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijac/ssst/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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