

EDITORIAL

Brazilian Meeting on Analytical Chemistry: Twenty editions of high-level analytical chemistry

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From its inception until this year, the Brazilian Journal of Analytical Chemistry has maintained a high level of scientific information, while also keeping the focus on the integration between industry, academia, and research institutions. The 10th anniversary of BrJAC in 2020 was followed by the celebration of twenty editions of the Brazilian Meeting of Analytical Chemistry (20th ENQA), the largest scientific meeting in the analytical chemistry field in Latin America. This 20th ENQA edition had over 800 participants and was organized together with the 8th Ibero-American Congress of Analytical Chemistry (8th CIAQA), coordinated by researchers from the Federal University of Santa Maria (UFSM) following the first edition organized in the state of Rio Grande do Sul in 1999 (10th ENQA).

As with previous editions, the 20th ENQA brought some advances in internationalization such as introducing for the first time a complete program, general information, and book of abstracts in the English language. The speakers were encouraged, when possible, to present their works in English. It resulted in an ENQA conference with the largest number of international speakers and provided a more friendly environment for participants outside Brazil. It is important to remember that other divisions of the Brazilian Chemical Society have already changed their respective meetings by using the English language, understanding the importance for internationalization of scientific meetings in South America.

For this special edition of BrJAC celebrating the 20th ENQA, we had contributions from many important researchers in different fields of analytical chemistry. In the present issue of the BrJAC, we can read the excellent **Interview** with a Brazilian researcher with her point of view about analytical chemistry, with special emphasis on the influence of Professor Carol Collins in the area of analytical chemistry in Brazil.

This edition also provides a **Point of View** and one **Letter** from internationally recognized scientists from North America and Europe, covering, respectively, the history over the last decades of analytical chemistry in Brazil and cooperation with international research groups (Dr. Ralph E. Sturgeon, Canada) as well as the different aspects of the importance of ethics in the global world of science (Dr. Ewa Bulska, Poland).

Looking at the **Articles** published in this edition, we have an important contribution in the chemical speciation study for As and Cr in seafood where two methods were described by using LC-ICP-MS and a chemometric approach allowing suitable detection limits. For the field of selective extraction, an interesting

work based on dispersive liquid-liquid microextraction of Fe for further determination in beer samples by flame atomic absorption spectrometry is described. In this work, the authors demonstrated the feasibility of a method avoiding the use of a dispersion solvent (only an extraction solvent was used, which shows a good improvement for this method). Another work focused on the synthesis of N-doped carbon dots for use with a modified electrode for the voltametric detection of 17 α -ethinylestradiol in solution by differential pulse voltammetry. Interestingly, the preparation of the N-doped carbon dot nanoparticles was based on citric acid and urea as the nitrogen source.

Another work involved the evaluation of the enzymatic degradation of amoxicillin using peroxidase combined with varying amounts of H₂O₂, and control of the reaction by liquid chromatography coupled with mass spectrometry achieved a high degradation rate of amoxicillin (about 50%). A study using liquid chromatography coupled to tandem mass spectrometry was applied for the determination of abamectin in soybean roots. Foliar spray was performed as an alternative application method and a QuEChERS method was used as sample preparation, allowing recoveries close to 100%. In another study, a miniaturized system utilizing digital image-based colorimetry in a portable device was applied for the determination of basic nitrogen content in diesel oil, a hard task considering the difficulties involving the analysis of crude oil and its derivatives. This arrangement proved to be advantageous in comparison to the reference methods since it was possible to reduce the consumption of reagents and waste generation, in agreement with green analytical chemistry.

A work describing the mineral composition of rice, carrots, and chayote after microwave-assisted digestion using diluted solutions and ICP-OES determination was presented. Some interesting results were obtained showing that the cooking process increased the concentration of Al, Cd, and Cr and decreased Cu and K for all food samples. Finally, a work successfully described the application of ultrasound for further determination of Al, Ba, Ca, Fe, K, Mg, Mn, Na, P, Sr, and Zn in lignocellulosic biomasses such as sugarcane bagasse, eucalyptus, wood residues, and pine wood residues. An ultrasound-based method proved to be efficient for the determination of most of the evaluated elements in lignocellulosic biomasses using milder extraction conditions and diluted reagents.

Then, as guest editors of this special BrJAC issue, we are glad to see many exciting new articles by researchers showing that the ENQA is a powerful meeting for changing and following new trends in the field and opening another door for spreading research results at a high level. Very importantly, the next edition of ENQA will be organized in the beautiful city of Belém (in the state of Pará, Brazil) and undoubtedly it will follow the successful contribution of previous ENQA editions for growing the analytical chemistry field.



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Renato Zanella is currently Full Professor of the Department of Chemistry at the Federal University of Santa Maria, Santa Maria, RS, Brazil. Coordinator since 2001 of the Laboratory for Pesticide Residue Analysis (LARP), CGCRE/INMETRO 17025 accredited lab since 2012, and leader of the Research Group for Chromatography and Mass Spectrometry (CPCEM) since 2001, coordinating several projects in the area of residues and contaminants in food, and environmental and industrial samples.