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Editorial

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In the fourth issue of Eclética Química, in 2023, readers will find important articles on chemistry education, groundwater quality and the rich chemical composition of volatile compounds contained in leaves of a medicinal plant. Opening this issue, a review presents how Instagram media can assist students to expand their critical thinking skills, solve problems, making the process fun, innovative, easy to understand, and not boring. The lack of motivation and comprehension of students make Chemistry be considered a difficult subject for them. According to this review, the application of the problem-based learning model in learning may help students to develop critical thinking skills and solve problems. Besides, the contents offer perspectives and innovations for teachers to deal with problems experienced by students. In the sequence, the analysis of different varieties of the same species demonstrates the different distribution of the volatile compounds present in leaves of *Mangifera indica* L. essential oils. The leaves of this plant have been used to treat diseases such as asthma, dysentery, cough, leucorrhea, jaundice, pain, and malaria. The use of comprehensive two-dimensional gas chromatography coupled to time-of-flight mass spectrometry allowed to identify 125 compounds in the variety 'espada' and 95 in the variety 'coração de boi', a considerable higher number than that until known. Following, it is presented a multivariate analysis of groundwater quality from different tubular wells by applying the techniques of principal component analysis (PCA) and hierarchical cluster analysis (HCA), which are powerful tools in the study of groundwater quality. Eleven parameters were analyzed of groundwater collected in two different seasons and both tools indicated a change in patterns between the analyzed periods. The correlation matrix corroborates the PCA data, and the HCA confirmed the correlations between the samples. Thus, it is feasible to assess the degree of similarity between the composition of the water from the different wells and between the parameters evaluated. Closes this issue a study that implements a didactic guide with scientific recreations to favor the learning of the periodic table, using an experimental, field, and explanatory research. For data processing, analysis, and interpretation the main theoretical and empirical methods were applied and allowed to conclude that the didactic guide with scientific recreations significantly improved students' learning of the periodic table.

The Editor and the Eclética Química Editorial team would like to render a special acknowledgement to the authors and reviewers for their effort, dedication to successful conclude not only this issue but all issues of this year with interesting articles leading with different subjects. Simultaneously, we kindly invite authors, readers, and reviewers to visit the Eclética Química page and contribute to the journal's next issues.

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