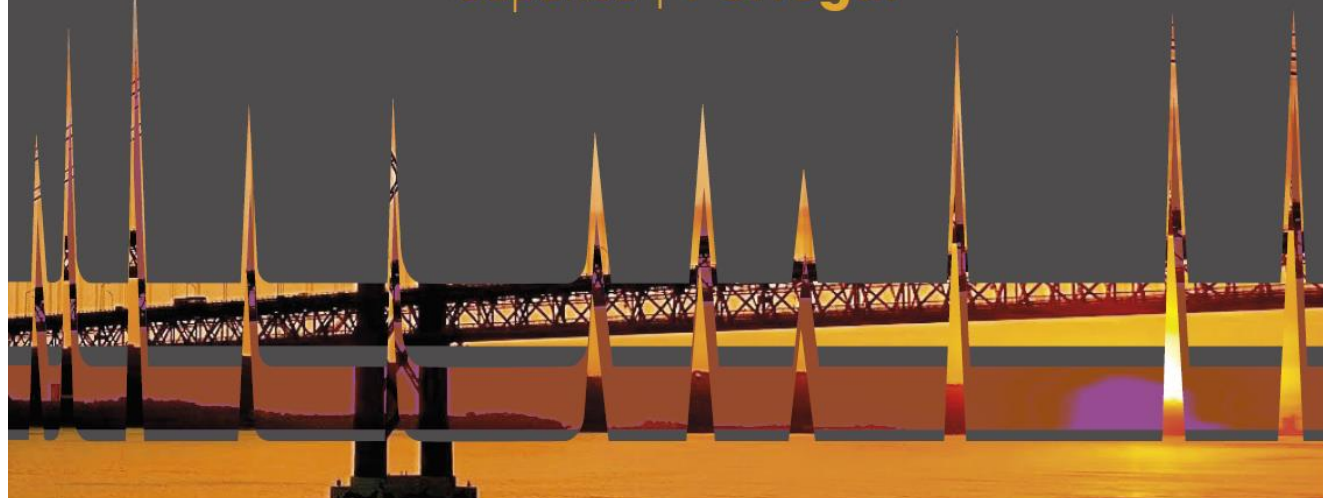


11^o CONGRESSO
NACIONAL
DE CROMATOGRÁFIA

20 anos
CROMATOGRÁFIA

11th NATIONAL MEETING ON CHROMATOGRAPHY

9 | 11 Dezembro 2019
Caparica | Portugal



Faculdade de Ciências e Tecnologia,
Universidade NOVA de Lisboa



Title

11th National Chromatography Meeting

Título

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SCIENTIFIC AND SOCIAL PROGRAM

SATURDAY, DECEMBER 7

09:00 Short courses registration and FCT NOVA

1. *Sample preparation methods for chromatographic analysis. 9:30 to 12:30*
Eduardo Mateus, Resolution Lab, CENSE-FCT-NOVA, Portugal
2. *MS hyphenation with LC and GC. 14:30 to 17:30*
Marco Gomes da Silva, Resolution Lab, LAQV-FCT NOVA, Portugal
3. *Validation of Chromatographic Methods. 14:30 to 17:30*
Alice Mosca – AIM, Portugal and Ricardo Bettencourt Silva – FCUL, Portugal

SUNDAY, DECEMBER 8

4. *Comprehensive gas chromatography – GC x GC. 9:30 to 12:30*
Philip Marriott, School of Chemistry, Faculty of Science at Monash University – Australia
5. *HPLC. 14:30 to 17:30*
Marco Gomes da Silva, Resolution Lab, LAQV-FCT NOVA, - Portugal

WEDNESDAY, DECEMBER 11

6. *Large-scale efficient extraction of chemical information from untargeted chemical profiling (GC/MS) data. 14:30 to 17:30*
Rasmus Bro, Copenhagen University, Faculty of Sciences – Denmark

P08 Targeted metabolites' analysis of *Hibiscus sabdariffa* L. calyces from Guinea-Bissau (West Africa)

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Numerous plants have been used all over the world and in addition to the food properties, their consumption seems to be associated with different beneficial properties for consumers' health. In this way, several scientific studies have been carried out with the objective of confirming these properties besides the assessment of their nutritional quality¹. *Hibiscus sabdariffa* L., is an annual or perennial plant with red stems and calyces, belonging to the Malvaceae family. It is cultivated mainly in the tropical and subtropical areas of both hemispheres².

The present study aimed to perform a targeted metabolites' analysis (free sugars, organic acids, tocopherols and fatty acids) of *H. sabdariffa* dried calyces (Guinea-Bissauan origin), as well as the individual phenolic composition of its infusion and hydroethanolic extracts. Free sugars were identified through an HPLC-RI system, the organic acids by UFLC-PDA, tocopherols by HPLC-fluorescence, fatty acids by GC-FID and the individual phenolic compounds were analysed through HPLC-DAD-ESI/MS.

Glucose and quinic acid showed the major concentration for sugars and organic acids, respectively. Palmitic acid and α -tocopherol were the most abundant lipophilic compounds. In the individual phenolic profile, thirteen compounds were identified, five phenolic acids and flavonols, and three anthocyanins. The hydromethanolic extract presented all the identified compounds, while the infusion revealed the presence of twelve molecules, with the absence of caffeic acid. In general, the hydroethanolic extraction seems to have favoured the extraction of non-anthocyanin phenolic compounds, while the infusion was the ideal methodology for the anthocyanins' extraction. Nevertheless, 3-*O*-caffeoylquinic acid was the major non-anthocyanin compound, while, delphinidin-3-*O*-sambubioside was the most abundant anthocyanin, in both extracts.

This study demonstrates the high potential of this species highlighting its usage as a functional food or beverage, and as a source of a possible nutraceuticals and natural pigments, giving an added value for future applications in several industrial sectors.

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- 2 S. Patel, *Biomedicine and Preventive Nutrition.* 4 (2014) 23–27.