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## **Book of Abstracts**





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## A Multi-Compound LC-MS/MS Method for the Screening of Fungi Secondary Metabolites in Brazil Nuts

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**Abstract.** The Brazil nut tree is specie in the monotypic type genus *Bertholletia* which produces commercially harvested edible seeds that may be affected by mycotoxins. The aim of this study was to evaluate quantitatively the occurrence of fungal metabolites in Brazil nuts. Nuts were collected from Agroforestry production areas in Amazon basin region. A total of 235 mycotoxins (including the most prominent ones) were screened by a multi-mycotoxin method based on HPLC-MS/MS. The recovery was between 56 and 136%. Fifteen mycotoxins were detected and quantified, in at least one sample; namely, aflatoxins B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub>, and M<sub>1</sub>, kojic acid, sterigmatocystin, methyl-sterigmatocystin, citrinin, cyclosporin A, cyclosporin C, cyclosporin D, cyclosporin H, rugulosin, altenariol-methylether and emodin. Aflatoxins were detected in just 1 sample (20%), but above its legal limit in Brazil and EU. Ochratoxin A and *Fusarium* toxins were not detected. Alternariol-methylether (from 0.75 to 3.2  $\mu$ g kg<sup>-1</sup>) was detected in all five samples. This is the first study dealing with the detection of kojic acid, citrinin, cyclosporin A, cyclosporin C, cyclosporin D, cyclosporin H, rugulosin, altenariol-methylether and emodin in Brazil nuts.

Keywords. Multimycotoxin, Bertholethia excelsa, fungal metabolites, aflatoxins and kojic acid.









