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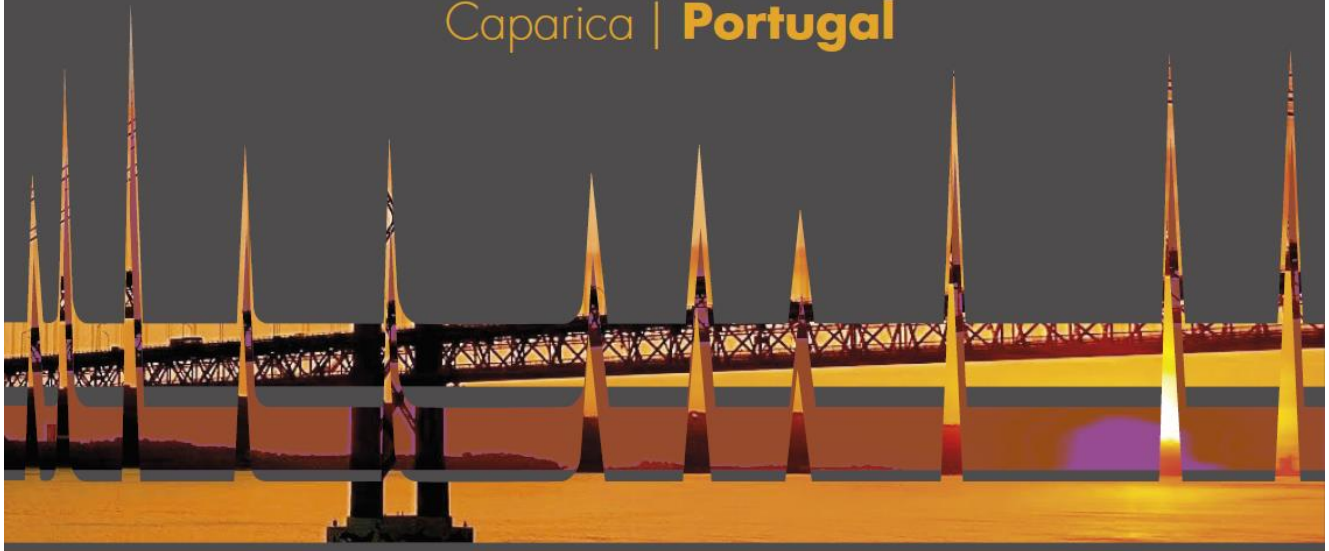

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P22 Method development for multimycotoxin analysis – aflatoxins, ochratoxin A and zearalenone – in the medicinal plant *Tribullus terrestris*

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Phytotherapy is a growing science that deals with the treatment of diseases or as health-promoting agents through plant-based products. The increasing consumption of these products has generated public health concerns since herbs and plants can be contaminated with toxigenic fungi, which can produce mycotoxins, causing many severe health effects in humans, from allergic responses to cancer.[1] *Tribullus terrestris* is a vine plant frequently used in supplements or medicines worldwide growing in moderate and tropical climates in the United States, Mexico, Eastern Europe, India and China.[2]
Both the root and fruit of the plant have been used medicinally in Traditional Chinese Medicine and Indian Ayurveda medicine for a variety of potential effects, including to enhance libido, keep the urinary tract healthy and reduce swelling.[3]
This work aims to develop and validate a method, according to Commission Regulation (EC) nº 401 February 23, 2006 to determine the levels of aflatoxins (AFB1, AFB2, AFG1, AFG2), ochratoxin A (OTA) and zearalenone (ZEA) in *Tribullus terrestris*, using immunoaffinity columns (IAC) for extraction and HPLC-FLD for quantification.[4]
The method was adapted from the IAC supplier, VICAM,[5] and the detection limits (LOD) and quantification limits (LOQ) for aflatoxins ranged from 0.191 μg kg^{-1} (AFG1) to 0.588 μg kg^{-1} (AFB1), and 0.635 μg kg^{-1} to 1.902 μg kg^{-1}, respectively. The LOD and LOQ for OTA were 1.404 μg kg^{-1} and 2.701 μg kg^{-1}, respectively; and for ZEA were 1.288 μg kg^{-1} and 3.590 μg kg^{-1}, respectively. The average recoveries determined at different spiking levels (10 μg kg^{-1} for AF and OTA and 50 μg kg^{-1} for ZEA) were 57 % (AFG2), 105 % (AFG1), 134 % AFB2 and 165 % (AB1) for Aflatoxins and 77 % (OTA) and 103 % (ZEA).
Results indicate that the method comply with the provisions of Commission Regulation (EC) nº 401/2006, only for AFG1, OTA and ZEA. The performance of the mycotoxins extraction and quantification from *T. terrestris* matrixes and other plant drugs will be further discussed.

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