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Worldwide Mycotoxin Reduction
in Food and Feed Chains

Poster Sessions



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Simultaneous multi-mycotoxin determination in maize and poultry feeds from Brazil by liquid chromatography/tandem mass spectrometry

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A multi-mycotoxin method based on High Performance Liquid Chromatography coupled with tandem Mass Spectrometry detection (HPLC-MS/MS) was applied to investigate the occurrence of toxic fungal metabolites in samples collected from a poultry feed factory and integrated poultry farms, in Brazil. A total of 119 samples were analyzed including 38 maize grain samples collected from the factory reception, 36 maize grain samples and 9 maize by-product samples collected during the factory processing, and 36 poultry feed samples collected from poultry farms. Twenty mycotoxins were detected and quantified in the investigated samples: aflatoxins B₁, B₂, G₁, G₂, fumonisins B₁, B₂ and B₃, hydrolyzed fumonisin B₁, zearalenone, agroclavine, chanoclavine, deoxynivalenol, nivalenol, enniatin A, A₁, B, B₁, beauvericin, kojic acid and moniliformin. All samples were contaminated with fumonisins B₁, B₂ and B₃. Contamination levels were low (near the LOD) most of toxins, except for FB₁ and FB₂ that reach 6,000 mg.mL⁻¹ and 2,450 mg.mL⁻¹ in maize and 1,120 mg.mL⁻¹ and 54 mg.mL⁻¹ in feed, respectively. This is the first study dealing with agroclavine, chanoclavine, enniatin A, A₁, B, B₁, beauvericin and kojic acid contamination of maize and poultry feeds from Brazil.

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