

Title Analysis of cyclopiazonic acid in corn and rice by a newly developed method
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Abstract

This paper describes an improved method for the detection of cyclopiazonic acid (CPA), an indole tetramic acid mycotoxin, that does not use chloroform. The method includes precipitation of protein with lead acetate, liquid–liquid partitioning with diethyl ether, and determination by HPLC with UV and a photodiode array detector. The quantification limit of the method was 25 ng CPA/g for both corn and rice. The average recoveries from corn spiked with 25, 50, 100 and 200 ng CPA/g were 64.7%, 68.5%, 74.6% and 75.4%, respectively, and from rice spiked with 25, 50, and 100 ng CPA/g were 51.4%, 70.4%, and 82.1%, respectively. The method was successfully applied to the analysis of corn samples from the Philippines and rice samples from Thailand. Out of 6 corn samples analyzed, one sample was contaminated with 76 ng/g of CPA. No rice sample was contaminated with CPA. This is the first report of the natural occurrence of CPA in corn from the Philippines.