



Levels of Ochratoxin A in Millet and Maize from Abeokuta, Ogun State, Nigeria

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ABSTRACT

Ochratoxigenic fungi are natural contaminants of cereal and the produced toxins are harmful to humans and animals. Ochratoxin A (OTA) is among the most important mycotoxins, and the International Agency for Research on Cancer (IARC) classifies it as possibly carcinogenic to humans (group 2B). Hence, this study was undertaken to determine the levels of OTA in millet and maize from Abeokuta, Ogun State, and Southwestern Nigeria. A total of 60 samples of cereals (10 sundried millet, 10 millet stored at room temperature for 10 days, 10 sundried yellow maize, 10 yellow maize stored at room temperature for 10 days, 10 sundried white maize, and 10 white maize stored at room temperature for 10 days) from different markets in Abeokuta were analyzed for OTA by liquid chromatography (LC) with fluorescence detection (FD). The incidence of OTA was 0.5%, 2%, 1.0%, 5%, 1.5% and 12.5% for sundried millet, millet stored at room temperature, sundried yellow maize, yellow maize stored at room temperature, sundried white maize, and white maize kept at room temperature. The highest OTA level was obtained for white maize stored at room temperature, having one sample (4ng/g) exceeded the European maximum limit (3ng/g) established for OTA in cereals. In conclusion, white maize stored at room temperature had the highest level of OTA, when compared with other cereal samples. Therefore prolong storage of cereals at room temperature should be discouraged.

Keywords: Ochratoxin A, millet, maize, levels, Abeokuta.

iSTEAMS Proceedings Reference Format

Olaoye Felix.A, Ejilude Oluwaseun, Daramola O.O, Olugbenga O.M (2019): Levels of Ochratoxin A in Millet and Maize from Abeokuta, Ogun State, Nigeria. Proceedings of the 17th iSTEAMS Multidisciplinary Research Nexus Conference, D.S. Adegbenro ICT Polytechnic, Itori-Ewekoro, Ogun State, Nigeria, 21st – 23rd July, 2019.P 110 . www.isteam.net - DOI Affix - <https://doi.org/10.22624/AIMS/ISTEAMS-2019/V17N2P13>