

## Occurrence of fumonisin B<sub>1</sub> in canned Pilsen type beers

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Although beer is known as a product of barley fermentation, several other carbohydrate sources can be utilized by the brewing industry (mainly maize, followed by wheat and rice). The substitution of up to 50% of barley for those raw materials is a common practice by the breweries industries, as they are less expensive and is authorized. Considering that most of the grains (cereals and pulses) are susceptible to fungal contamination including toxigenic strains, the aim was to investigate the possible presence of field mycotoxins (fumonisin B<sub>1</sub>-FB<sub>1</sub>,-known as a maize contaminant) in beers Pilsen type. Canned beers samples (85) of different brands (9) were purchased randomly in supermarkets and FB<sub>1</sub> was analyzed according to the AOAC (2005) by liquid chromatography with fluorescence detection (ex: 335; em: 440 nm). The limit of quantification-LOQ and recovery were 21.0 µg/L and 99.4%, respectively. Although 70.1% of the total samples had FB<sub>1</sub> below the method LOQ, it was possible to detect it in 29.4% samples and different brands, corresponding to 26 beer samples. The levels range from 119.1 to 876.63 µg/L, with an average of 256.00 µg/L (SD and RSD: 178.39 and 143.50%, respectively), being only one sample reaching a rather high level (1135.7 µg/L). The occurrence of FBs in maize and maize-based products contributes to problems related to human health. It should be noted that there is no regulation for FBs (including FB<sub>1</sub>) for beers; however, there are regulations for maize and its derivatives.

### Biography

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