

## Effect of AFB<sub>1</sub>, OTA and ZEA as stressors on fermentation activity of industrial yeasts

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Yeasts have an important role in the biotechnological production of ethanol, as well as in the production of fermented food and beverages. Mycotoxins, secondary metabolites of molds, can contaminate a large number of foods due to their ubiquity and therefore present great risk to human health. Other than their toxicological effects on humans, mycotoxins can have negative effects on various properties of yeasts and consequently limit their use in industry. Therefore, the aim of this work was to determine the effects of aflatoxin B<sub>1</sub> (AFB<sub>1</sub>), ochratoxin A (OTA) and zearalenone (ZEA) on metabolic activity and biomass growth of selected yeasts *S. cerevisiae*, *S. uvarum*, *C. utilis* and *K. marxianus*. The presence of fermentation products was determined with high-performance liquid chromatography after 24h of incubation. In the early stage, all mycotoxin-exposed yeasts had lower metabolic activity as well as biomass growth when compared to control. However, concentrations of metabolic products and biomass reached the control levels by the end of the process, with the exception of *C. utilis* exposed to zearalenone (ZEA). Adaptive response to exposed mycotoxins suggests that certain yeasts could be used to control mycotoxin concentrations in the production of fermented food and beverages.

**Key words:** aflatoxin B<sub>1</sub>, metabolism, ochratoxin A, yeasts, zearalenone