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**From malt to wheat beer: A comprehensive multi-toxin screening, transfer assessment and its influence on basic fermentation parameters**

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**ABSTRACT**

The aim was to determine the mycotoxin transfer rate into beer during a semi-industrial production process and the effect of fungicide treatment in the field on mycotoxins concentrations in beer. To ensure the usual practical agronomical conditions, sample A was treated with fungicide Prosaro® 250, and sample B was infected with *Fusarium culmorum* spores, in order to obtain infected malt. Malt was produced using standard procedure and beer was produced in a semi-industrial unit. During fermentation measurement of sugars (maltotriose and maltose), glycerol and ethanol content was performed on a daily basis. Multiple toxins were determined in malt and beer. Deoxynivalenol (DON), its modified plant metabolite DON-3-glucoside (DON-glucoside), brevianamide F, tryptophol, linamarin, lotaustralin, culmorin (CUL), 15-hydroxy-CUL and 5-hydroxy-CUL were detected in all samples. Results indicate that *F. culmorum* infection did not influence the fermentation process or the alcohol concentration.

**Key words:** wheat malt, beer, multi-mycotoxins, fungicide, fermentation course, natural toxin

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