

# **ESTIMATION OF EFFICIENCY OF APPLICATION OF TECHNOLOGICAL FEED ADDITIVE FOR DEOXYNIVALENOL AND ZEARALENONE**

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It was conducted research under laboratory conditions, concerning the effectiveness of the technological feed additive Liatoksil, which belongs to the functional group of substances that reduce the feed contamination by mycotoxins. The objective of our research was to establish in vitro the effectiveness of the feed additive Liatoksil by confirming its ability to restrain or reduce the absorption of mycotoxins (deoxynivalenol and zearalenone).

The effectiveness of the specific action of the feed additive was determined quantitatively at various pH values, simulating a change in the acidity of the medium in the digestive canal of animals.

The research was conducted in two stages: screening - using solution of mycotoxin and the main - using compound feed, which contained mycotoxins. At the screening stage, feed additive Liatoksil was added to buffer solutions containing, respectively, deoxynivalenol and zearalenone in an amount of 200 mcg/g. In the main experiment, the feed additive Liatoksil was added to the compound feed at the rate of 1, 2, 5 g / kg and the samples were thoroughly homogenized. Were determined the absorption magnitude (in an acidic medium) and the desorption magnitude (in an alkaline medium).

The criterion for evaluating the effectiveness was the practical coefficient of efficiency, which was calculated by determining the difference between the amount of inserted mycotoxin and the amount of mycotoxin adsorbed after incubation in an acidic medium, taking into account the value of desorption after incubation in an alkaline medium. It was established that during screening studies, the practical coefficient of efficiency of the feed additive relative to deoxynivalenol was 35,0%, and relative to zearalenone was 74,0%.

In the main experiment, it was found that the practical coefficient of efficiency of the feed additive depending on the dose was 19,8 – 21,8 % for deoxynivalenol and 42,4 - 50,0% for zearalenone. The findings of investigation confirm that the feed

additive Liatoksil evinces marked adsorption properties to zearalenone, and low adsorption properties with respect to deoxynivalenol

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