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(54) **BACILLUS LICHENIFORMIS AND METHOD FOR DETOXIFICATION OF ZEARELENONE**

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(58) **Field of Classification Search** **435/252.5**
See application file for complete search history.

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detoxification, regulations and intake of zearalenone: An oestrogenic mycotoxin, 2007, Food and Chemical Toxicology 45:1-18.*

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(57) **ABSTRACT**

The present invention discloses an isolated pure culture of a novel strain CK1 of *Bacillus licheniformis*, DSM 025954, capable of detoxification of zearalenone (ZEN). Using physiological, biochemical, morphological identification and 16S rRNA gene sequence analysis methods, the strain CK1 was identified as *Bacillus licheniformis*. Through extracellular xylanase, CMCase protease assays and evaluations for zearalenone detoxification, the strain CK1 strain was identified to possess good ZEN-detoxifying ability, to be non-hemolytic, non-enterotoxin producing, and displayed high levels of extracellular xylanase, cellulase, and protease activities. Accordingly, *Bacillus licheniformis* CK1 can be applied as food and feed supplement for bio-detoxification of ZEN.

7 Claims, 9 Drawing Sheets

