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**ABSTRACT
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CONTROL OF *PENICILLIUM VERRUCOSUM* VAR. *CYCLOPIUM* IN CREAM CHEESE BY *AGARICUS BOHUSII* EXTRACT

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Food processors, food safety researchers, and regulatory agencies have been increasingly concerned with the growing number of food-borne illness outbreaks caused by different fungal pathogens. Mushrooms could be a potentially useful sources of antimicrobial compounds. *Agaricus bohusii* is edible, taste and prized mushroom from *Agricaceae* family. We tested ethanol extract of this mushroom as a natural food preservative. Extract was added in cream cheese infected with food contaminating microfungi *P. verrucosum* var. *cyclopium* (previously isolated from cheese) in different concentration (10-100 mg/mL). Solutions were kept at room temperature and at +4°C and daily observed during 7 days. Growth inhibition of *P. verrucosum* var. *cyclopium* by ethanol extract of *A. bohusii* is calculated as a percent of inhibition. There is no growth of microfungi at second day after the incubation at the samples kept at +4°C, samples at 25°C showed different growth inhibition depending on extract concentration. Growth inhibition percentage of extract toward microfungi at 4th day can be presented as following: 13.3-53.3 % at +4°C and 100 % on all concentration at room temperature. The growth inhibition of microfungi was also observed at 7th day but on higher level, 83.3-90.0 % in refrigerator, while dose depending factor was not observed at the samples kept at room temperature. On all concentration tested the growth inhibition was 100 %. It looks that the lowest concentration (10 mg) of mushroom extract was either strongly effective as the highest one (100 mg) at room temperature. Because of increasing pressure of consumers and legal authorities, the food industry has tended to reduce the use of chemical preservatives in their products to either completely nil or to adopt more natural alternatives for the maintenance or extension of product shelf life. In this manner mushroom extracts may replace conventional chemical antimicrobials.