

THE SEARCH OF ACTIVE BACTERIAL STRAINS AGAINST YEAST-CAUSED TAINTS OF SILAGE

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Abstract. The objective of this work was to screen the killer action of the bacterial isolates T1x, T2x, T3x, Ux and Ux308 against spoilage yeasts in silage. The bacterial isolates T1x, T2x, T3x, Ux308 were isolated from spontaneous fruit and berry fermentations and the Ux308 – from soil. Yeasts of *Aureobasidium*, *Cryptococcus*, *Candida*, *Geotrichum*, *Pichia*, *Rhodosporidium* and *Rhodotorula* genera in the experiments were used and they are maintained in the living culture collection. The killer ability was tested using routine methods and standard yeasts *Saccharomyces cerevisiae* killer strains K7, M437, MS300, Rom-K100, DBY, K28 were employed as a control. The results of the investigation showed that bacterial isolates T1x, T2x, T3x, Ux and Ux308 exhibited a killer activity against silage spoilage yeasts. The bacterial isolate Ux308 displayed a very strong killer action and formed clear more than 20 mm diameter growth inhibition zones on the lawn of *Candida utilis* C.Ut.1, *Aureobasidium pullulans* A.P.1 and *Rhodotorula mucilaginosa* Rh.M.1. The standard killer strains *Saccharomyces cerevisiae* K7, M437, MS300, Rom-K100, DBY, K28 had no killer effect on the investigated silage spoilage yeasts. The obtained primary results showed that after detailed biochemical and toxicological assay bacterial isolates could be used for silage protection from microbiological agents.

Keywords: silage, yeast, bacteria, killer activity.