

## SENSITIVITY OF THE TEST CULTURES TO THE BERRY ETHANOL AND WATER EXTRACTS, AND JUICE

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**Summary.** Undesirable in food products the yeasts and bacteria were used in the test cultures. The assessment of antimicrobial activity of the berry extracts, the following six bacterial test cultures *Listeria monocytogenes* (ATCC 19117), *Staphylococcus aureus* (ATCC 25923), *Escherichia coli* (ATCC 25922), *Bacillus cereus* (ATCC 10876), *Micrococcus luteus* (ATCC 9341), *Enterobacter aerogenes* (ATCC 13048), and eight yeast species (*Debaryomyces hansenii*, *Trichosporon cutaneum*, *Kluyveromyces marxianus var. lactis*, *Sacharomyces cerevisiae*, *Candida parapsilosis*, *Torulaspora delbrueckii*, *Pichia kluyveri*, *Rhodotorula rubra*), obtained due to inoculation of the specimens taken from dairy plants, were used in the study.

The total anthocyanins and phenolics compounds content was different in investigated extracts, however, antimicrobial action of following extracts was comparable. *Micrococcus luteus* was the most sensitive to the cranberry, black currant, bilberry extracts from berries and berry cakes. It makes inhibition zone in 23-30 mm diameter. Other test cultures demonstrate less sensitivity to the antimicrobial action of the extracts. The black currant and bilberry extracts were diluted to obtain the level of anthocyanins like in cranberry extract. Dilution reduced antimicrobial properties of extracts – diameter of inhibition zone down in 7.23 mm. Maximum alteration (12.5 mm) showed the most sensitive *Micrococcus luteus* culture. Yeast shows minimal sensitivity to the ethanol berry extracts. Only *T. cutaneum* makes bigger transparency zone. Significantly higher amounts of anthocyanins were determined in the water extracts compare to ethanol extracts from bilberry and black currant. However, water extracts of berries showed lowest effectivity. Black currant juice had inhibitory effect on *M. luteus*, *S. aureus* and *Listeria monocytogenes*. Yeast shows resistance to water extracts and juice.

**Key words:** berry, extracts, antimicrobial properties, test cultures.