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Czech J. Food Sci.

Slačanac V., Lučan M., Hardi J., Krstanović V.,

Koceva-Komienic D.: Fermentation of honey-sweetened soymilk with **Bifidobacterium lactis** Bb-12 and **Bifidobacterium** longum Bb-46: fermentation activity of bifidobacteria and In vitro antagonistic effect against Listeria monocytogenes FSI N1-017

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The influence of the honey addition on the fermentative activity of *Bifidobacterium lactis* Bb-12 and *Bifidobacterium longum* Bb-46 in soymilk was determined. Additionally, the

initial of honey-sweetened fermented soymilk against Listeria monocytogenes strain was examined. Two monofloral honey types were added to soymilk before the fermentation: darkcoloured chestnut honey and lightcoloured acacia honey. On the basis of our previous studies on cow and goat milks, the basic hypothesis of this study was that the addition of honey could influence the growth of Bifidobacterium lactis and Bifidobacterium longum during the fermentation of soymilk. The addition of honey also influenced the decrease of raffinose and stachyose contents during fermentation. Furthermore, a higher inhibitory potential was assumed against Listeria monocytogenes caused by the honey addition. The obtained results show that both types of honey influenced the fermentative activity and numbers of Bifidobacterium lactis Bb-12 and Bifidobacterium longum Bb-46 viable cells in soymilk. Chestnut honey strongly influenced the acidity increase during the soymilk fermentation. A disc assay showed that the development of the inhibition zones of the growth depended on the type and concentration of honey, as well as on the type of milk. The

chestnut honey had generally a higher inhibitory effect than acacia honey.

Keywords:

bifidobacteria; fermenttive acivity; fermented soymilk; acacia honey; chestnut honey; inhibitory effect

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