

**INFLUENCE OF THE ADDITION OF *HELIANTHUS TUBEROSUS* L.
FERMENTED WITH DIFFERENT LACTOBACILLI
ON ACRYLAMIDE CONTENT IN BISCUITS**

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Biscuits are high in carbohydrates, fat and energy, but low in fibre, vitamins and minerals, thus unhealthy for daily use. Because of acceptability in all age groups, longer shelf life, better taste and the stable market position as snacks, biscuits are considered an important product, the functional and nutritional value of which could be further improved. The aim of the study was to investigate the effect of the addition of *Helianthus tuberosus* L. fermented with different lactobacilli (*Lactobacillus sakei* KTU05-6, *Pediococcus acidilactici* KTU05-7 and *Pediococcus pentosaceus* KTU05-9) on acrylamide content in biscuits. Results of study indicated that submerged fermented *Helianthus tuberosus* L. tubers had the significantly ($P \leq 0.05$) lower pH, higher total titratable acidity and from 1.2 to 1.3 times higher protease and from 1.2 to 2.0 higher alpha amylase activities compared to treated by solid state fermentation. The acrylamide content in all biscuit samples enriched with submerged fermented *Helianthus tuberosus* L. was measured lower than $10 \mu\text{g kg}^{-1}$. We conclude that submerged fermentation with selected lactobacilli provides fermented products specific characteristics (lower pH, higher total titratable acidity, higher protease and alpha amylase activities) which have effect on the asparagine content reduction in plants additives and acrylamide reduction in biscuits enriched with *Helianthus tuberosus* L.

Keywords: Biscuits, *Helianthus tuberosus* L., lacto-fermentation, acrylamide

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