

Growth and survival of probiotic *Lactobacillus* strains in orange juice(s)

Judit Perjéssy, Ferenc Hegyi, Zsolt Zalán

The health benefits of orange juice (OJ) are widely investigated and OJ contains many essential nutrients. Despite of the popularity of the orange juice the probiotication of OJ is scarce. The aim of our study was to investigate the possibility of the probiotication of orange juice by fermentation with probiotic starter culture. From the preliminary experiments it was observed that pH adjustment, supplement of nutrients as glucose and yeast extract are needed to reach the recommended 10^9 CFU/mL cell density. For fermentation three types of orange juice were used: pasteurized OJ from concentrate, pasteurized squeezed OJ, and freshly squeezed OJ provided from local market and 6 probiotic *Lactobacillus* strains were investigated as strater culture. Based on the experiments carried out, not only the properties of the strain, but also the type of orange juice has a significant effect on lactic acid fermentation, strain growth and viability, so it is important to select the starter culture for the given type of raw material. By an appropriate strain selection, plant-based lactic acid fermented product can be produced, which contains the recommended viable probiotic cell count and they survive for several months.