# Probiotic vegetable juices

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**Abstract**

Physico-chemical characteristics of celery and beetroot juices, with and without pulp, fermented with a bifidobacteria culture. Therefore, $p$H, acidity (as lactic acid), fermentative and reducing sugars were analyzed during 48 hours of fermentation. Also, the evolution of bacteria number was assayed in order to achieve a level appropriate for a probiotic product. During fermentation, the sugars from the celery juice are rapidly consumed and the acidity is 4.2 higher, while in beetroot juice, the process of fermentation is slower (smaller slope) and lactic acid accumulation is only 2.7 times. It worth be mentioned that although the level of acidity is different, the $p$H values are similar. This could be explained by the different type of acids present in the two juice types or by the existence in the beetroot juice of a higher level of nitrogen compounds, which act as buffers. The bacteria counting demonstrated that only after $36 - 48$ hours of fermentation a level of $10^7 - 10^8$ cells is attained, values which are characteristic to a probiotic product. The fermented beetroot juice has a pleasant taste, while the celery juice has a pronounced sour taste and needs to be corrected.

**Keywords**: Probiotics, vegetables, bifidobacteria, fermented juices.

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