



Study by PFGE of *Bifidobacterium animalis* BB12 i BLC1 strains

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1.OBJETIVE

Macrorestriction analysis of genomic DNA of the strains *Bifidobacterium animalis* BLC1 and BB12 digested with the restriction enzyme SpeI and resolved by pulsed-field gel electrophoresis (PFGE).

2.MATERIAL AND METHODS

The two strains were supplied by the company as pure culture plates and were cultured in De Man, Rogosa and Sharpe (MRS) medium supplemented with L-cysteine (0.1 %) and incubated at 37°C for 72h under anaerobic condition.

The study of PFGE was made following the methodology described by Rodas *et al.*, (2005), changing the times of incubation of cellular lysis accordingly. The macrorestriction analysis was carried out using the restriction enzyme SpeI required by the company. The electrophoresis conditions applied were those detailed in Briczinski and Roberts (2006).

3. RESULTS

Figure 1 shows the PFGE patterns of *B. animalis* BLC1 and BB12 strains with SpeI applying electrophoresis conditions detailed in Briczinski and Roberts (2006). BB12 strain seemed to have one faint band of difference compared to the BLC1 strain. A second gel was performed to ensure, for one side, the reproducibility of SpeI digestion and additionally obtain a better resolution of band pattern to improve the visualization of the additional faint band. Figure 2 shows the result confirming the previous one.

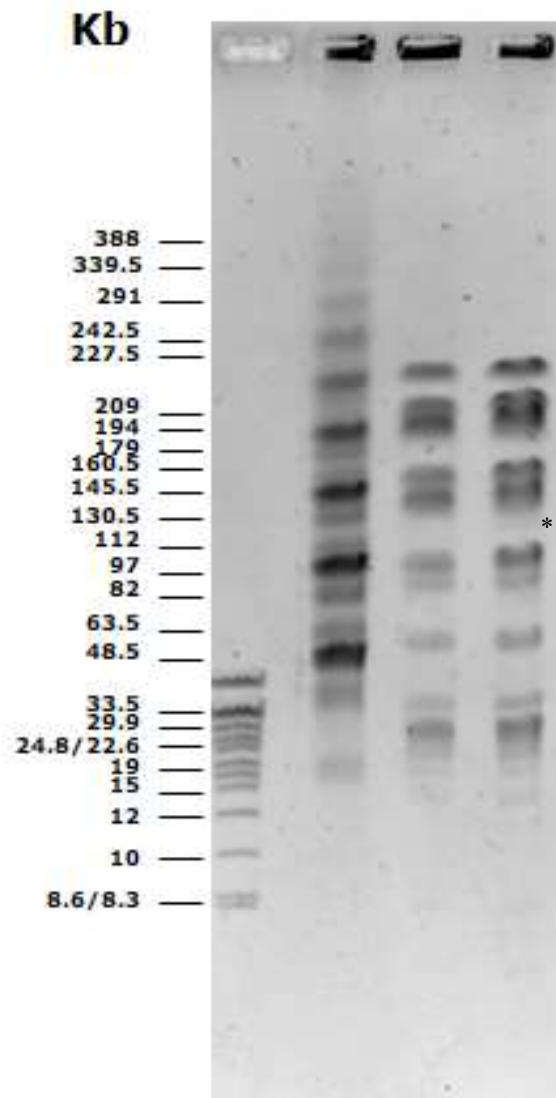


Figure 1. PFGE pattern of *B. animalis* BLC1 and BB12 strains after digestion with SpeI enzyme. Order: Marker1, Marker 2, BLC1, and BB12.

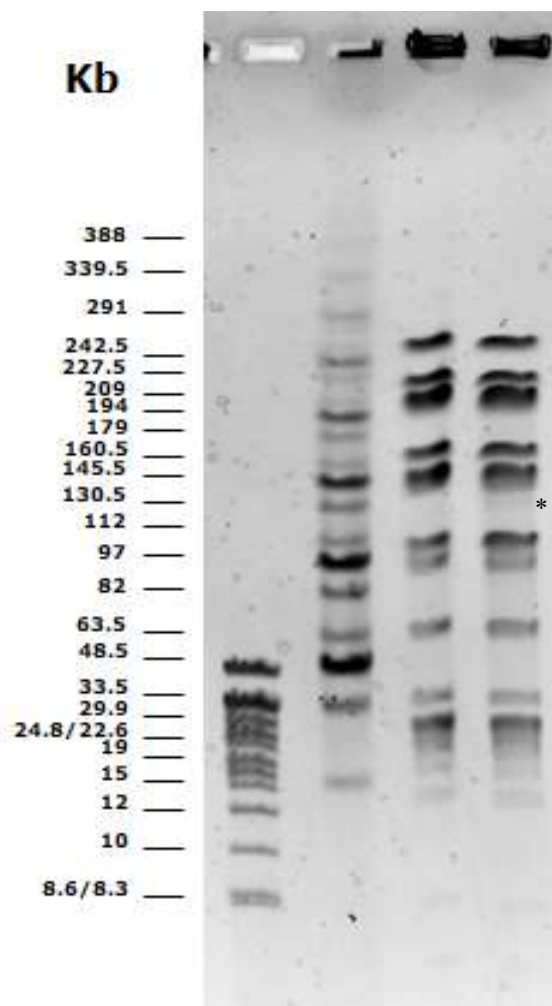


Figure 2. PFGE pattern of *B. animalis* BLC1 and BB12 strains after digestion with SpeI enzyme. Order: Marker1, Marker 2, BLC1, and BB12.

References

- Rodas AM, Ferrer S, Pardo I. Polyphasic study of wine Lactobacillus strains: taxonomic implications. *Int J Syst Evol Microbiol*. 2005 Jan;55(Pt 1):197-207
- Briczinski EP, Roberts RF. Technical note: a rapid pulsed-field gel electrophoresis method for analysis of bifidobacteria. *J Dairy Sci*. 2006 Jul;89(7):2424-7