

Identification and genetic diversity of *Bacillus cereus* strains isolated from a pasteurized milk processing line in Algeria

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Abstract/Résumé : *Bacillus cereus* is a food pathogen of major concern to the dairy industry. Strains of *B. cereus* were isolated in 2006 and 2010 from a pasteurized milk processing line in a dairy plant in Algeria. Pasteurized milk is obtained from reconstituted and processed milk powder. This study was designed to discriminate between the isolated *B. cereus* strains and to predict their food poisoning potential. Strains were fingerprinted by M13-PCR, and identified at the phylogenetic group level by amplified panC gene sequence analysis. They were clustered into three distinct M13-PCR groups: one major group which included 17 strains and two minor groups which contained two and one strains, respectively. Strains originating from both the process equipment and milk powder were from the major group indicating that milk powder was the main source of initial contamination. Strains from the major and second group were affiliated to the mesophilic phylogenetic group III while the unique strain of the third group was classified into the mesophilic phylogenetic group IV. The data presented in this study showed a very low genetic diversity among *B. cereus* strains identified in milk powder and secondly by milk processing systems, as well as persistence in the dairy environment of specific *B. cereus* genotypes, across 4 years. M13-PCR typing and phylogenetic affiliation were useful for characterizing *B. cereus* dairy isolates, permitting their differentiation within the *B. cereus* group, and showing homogeneous contamination throughout the pasteurized milk processing line. The recurrent genotypes which belong to the potentially toxigenic group III *B. cereus* could threaten pasteurized milk safety.

Keywords/Mots clés :

Journal title / Revue : Identification and genetic diversity of *Bacillus cereus* strains isolated from a pasteurized milk processing line in Algeria , 1958-5586, "DOI" , 10.1007/s13594-012-0093-2, "issue" ,1 , "volume" 93 , "pp" 73-82, JAN 2013

Source: DAIRY SCIENCE & TECHNOLOGY