

## Sporolactobacillus in Food: Literature Discussing Prevalence and Control April 23, 2015

*Sporolactobacillus* bacteria first were discovered in chicken feed in the 1960s [1]. The genus *Sporolactobacillus* is unusual in that its members are lactic acid-producing bacteria that can form spores [2]. The ability to sporulate make members of the genus more heat-resistant than other lactic acid-producing bacteria.

*Sporolactobacillus* is typically found in soil, but can occasionally be found in fermented or spoiled foods [3]. The organism has been found in various fermented products, including fermented fish/shrimp paste [4], a Japanese non-salted pickle [5], green olives [6], fermented sweet flour paste [7], and an intermediate in sugar-cane processing [8]. *Sporolactobacillus* also has been found in spoiled orange juice [9]. A comprehensive study [10] of 699 food (mostly produce and chicken) and environmental samples found the bacteria in 2 of 38 soil samples, but not in any of the food samples (including 32 mushroom samples) tested.

Control of the organism to prevent spoilage in food products has not been addressed specifically in the literature. However, *Sporolactobacillus* has been considered as a potential probiotic, and as a result, studies have looked at its resistance to sorbate and nitrite [11], reduced water activity [12], gamma irradiation [13], and acid and bile salts [14]. It even has been suggested that *Sporolactobacillus* spores be added to refrigerated processed foods of extended durability (REPFED)-foods prior to heat processing: If the finished product is temperature-abused, the spores will germinate, produce acids, and make the product obviously spoiled to the consumer [15].

Several early studies reported on the thermal tolerance of *Sporolactobacillus* [1, 16], and this work is summarized in the 2014 review [2].

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