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LACTOBACILLUS SALIVARIUS LBSA 1

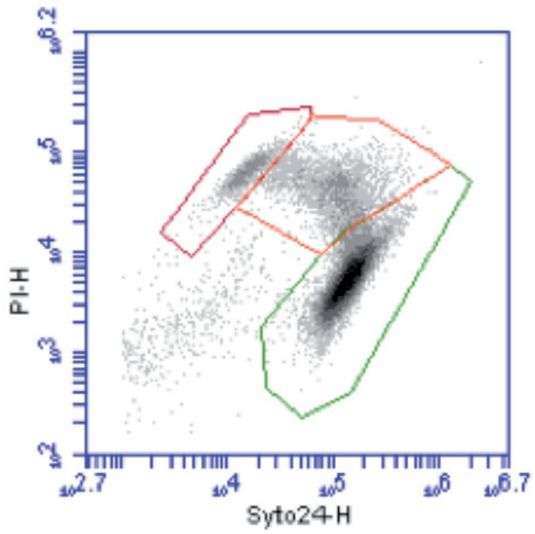
Food Safety

Live lactic probiotic bacteria in a powder form, commonly used by the food industry and perfectly safe for human consumption in food supplements. This species figures on the EFSA's list of micro-organisms used in food (QPS "*Qualified Presumption of Safety list*" 2013).

Do not contain allergens according to European Regulation 1169/2011.

Viability

Flow cytometry is used to analyse cell viability, one by one, with the help of a fluorescent compound, tracer of **Lbsa1** membrane's integrity.



6 % of dead cells
16 % of damaged cells
78 % of live cells

Stability in powder

Correctly formulated in a sachet or capsule, **Lbsa1** is a **particularly stable** strain at room temperature.

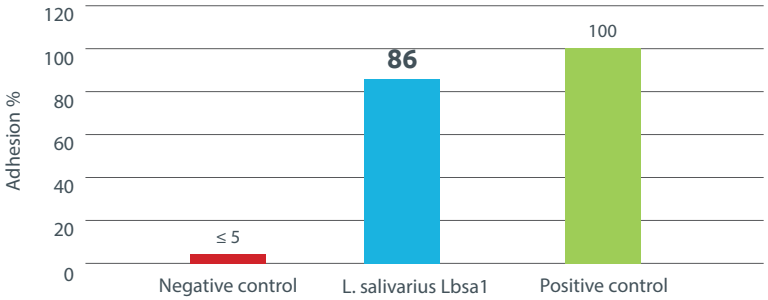
	20°C		25°C / 60 % RH	
Duration (months)	Viability (CFU/g)	Billion(s) per unit	Viability (CFU/g)	Billion(s) per unit
0	6.0E+09	42	6.0E+09	42
3	6.4E+09	45	5.2E+09	36
6	6.3E+09	44	4.5E+09	32
9	5.8E+09	41	5.4E+09	38
12	5.3E+09	37	4.5E+09	32
18	4.9E+09	34	4.6E+09	32
24	4.5E+09	32	4.3E+09	30

CFU: Colony Forming Unit ; RH: Relative Humidity

70% of the initial viability is still maintained after two years of storage at 25 °C

Intestinal mucosa adhesion

Lbsa1 adheres **very efficiently** to the surface of Caco-2 cells (human intestinal cells):



Production of antimicrobial substances

The growth of pathogen microorganisms is **strongly** inhibited by **Lbsa1** in agar medium:

Pathogen	Result
Clostridium difficile	S
Clostridium perfringens	S
Escherichia coli O157:H7	S
Listeria monocytogenes	S
Salmonella typhimurium	S

R = Resistant; S = Susceptible; I = Intermediate

Lbsa1 produces also a **significant amount** of hydrogen peroxide.

This technical information is supplied to inform our clients and may be modified at a later date. Additional information and the experimental protocols of the in vitro evaluation of probiotic properties used are available upon simple request.

FT Lbsa1-December17

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