

Food Safety



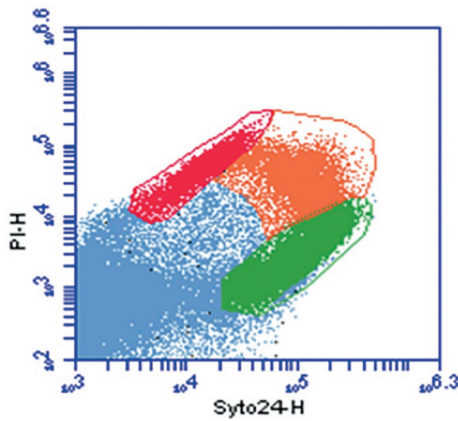
Live lactic probiotic bacteria in powder form, commonly used by the food industry and perfectly safe for human consumption in food supplements. This species figures on the EFSA's list of micro-organisms used in food (QPS "Qualified Presumption of Safety list" 2013).

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 the integrity of **Lbca1**'s membrane.



12 % of dead cells
16 % of damaged cells
72 % of live cells

Stability in powder



Lbca1 is a particularly stable strain at 20°C and 25°C when correctly formulated in a sachet or capsule.

Duration (Months)	20°C		25°C / 60 % RH	
	Viability (CFU/g)	Billion(s) per unit	Viability (CFU/g)	Billion(s) per unit
0	1.1E+10	78	1.1E+10	78
1.5	/	/	6.1E+09	42
3	1.1E+10	77	1.1E+10	74
4.5	/	/	1.0E+10	71
6	9.2E+09	64	8.9+09	62
9	9.0E+09	62	9.5+09	66
12	9.4E+09	65	8.0E+09	56

CFU: Colony Forming Unit ; RH : Relative Humidity

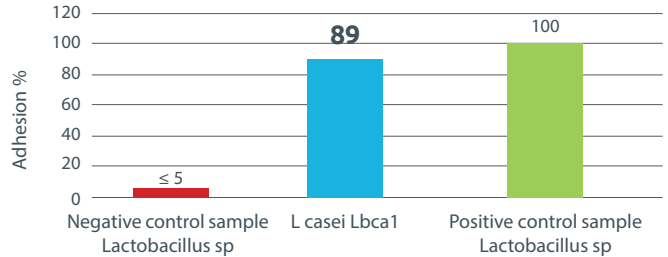
More than 80% of the initial viability is still present after one year's storage at 20°C.

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

Intestinal mucosa adhesion



Lbca1 adheres very well to Caco-2 cells' surface (human intestinal cells):



Production of antimicrobial substances



Lbca1 strongly inhibits the growth of pathogenic micro-organisms in agar medium :

Pathogen	Result
<i>Clostridium difficile</i>	S
<i>Clostridium perfringens</i>	S
<i>Salmonella typhimurium</i>	S
<i>Listeria monocytogenes</i>	S
<i>Escherichia coli</i>	S

R = Resistant; S = Susceptible; I = Intermediate

Immunomodulatory properties



Lbca1 has an *in vitro* intermediate immune profile (PBMC model, peripheral blood mono nuclear cells).

