

Supplementary

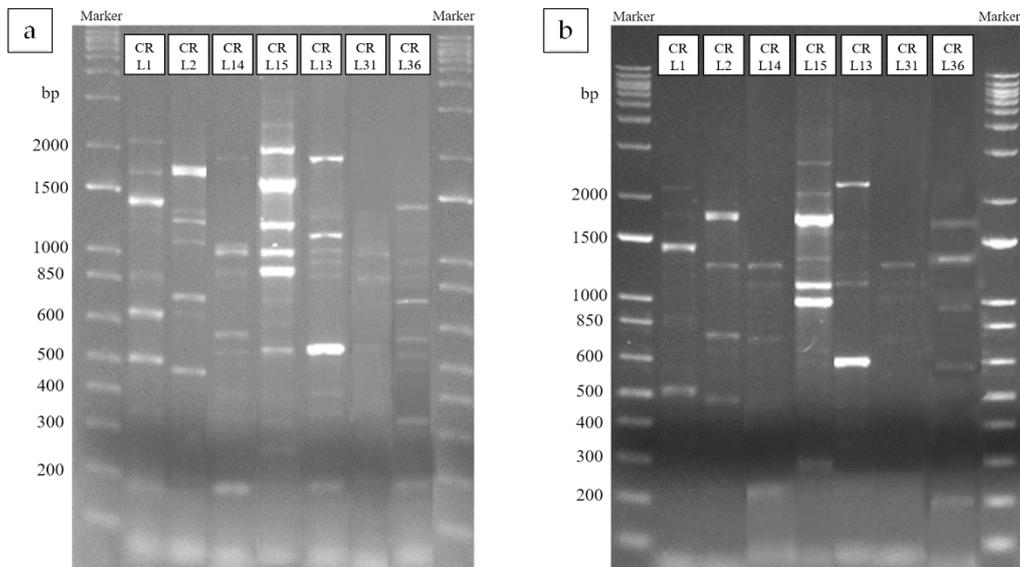


Figure S1. Randomly Amplified Polymorphic DNA-Polymerase Chain Reaction (RAPD-PCR) patterns of *Lp. plantarum* CR L1, *W.confusa* CR L2, *Lc. garvieae* CR L14, *Ll. sakei* CR L15, *Ll. curvatus* CR L13, *Lc. garvieae* CR L31, *E. durans* CR L36, obtained by using primer – along with RD1(a) and primer – along with RD1(b); Marker L100 DNA ladder.

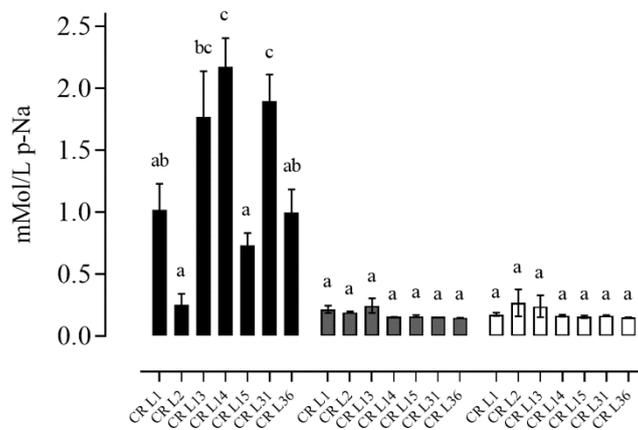


Figure S2. LAB peptidase activities, PepNC (black bars), PepA (grey bars) and PepO (white bars). Different letters (a–d) indicate statistically significant differences ($p < 0.05$). The data are the means of three independent experiments (mean \pm standard deviations).

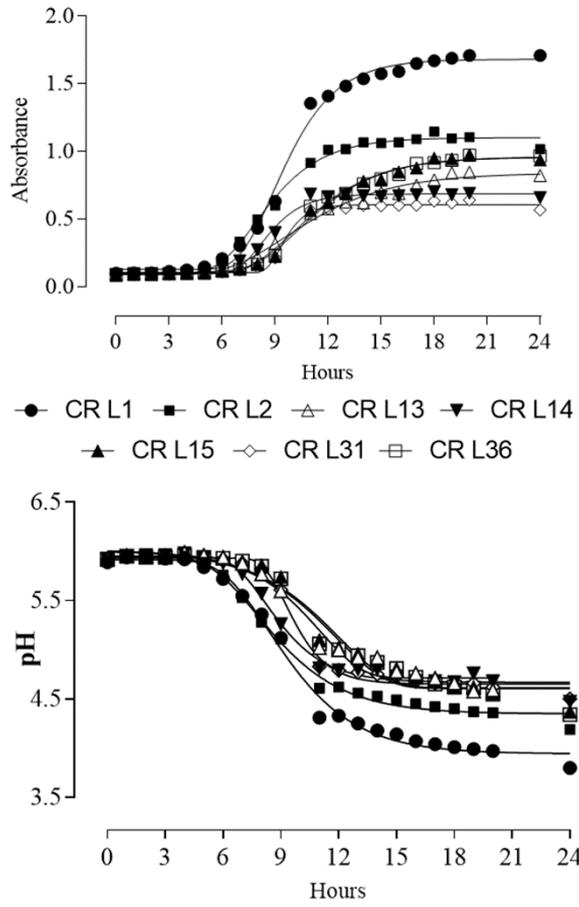


Figure S3. Growth (upper graph) and pH (lower graph) kinetics of lactic acid bacteria in MRS broth monitored for 24 hour at 30°C.

Table S1. Acidification parameters (pH and Total Titratable Acidity, TTA, organic acids), volume increase (% $\Delta V/V_0$), microorganism concentrations (LAB and yeast) of the doughs at the end of fermentation; Δ : difference between the final and the initial value). Results are expressed as average \pm standard deviation ($n = 3$).

	Final pH	Δ pH	Final TTA (mL)	$\Delta V/V_{in} \times$ 100	Lactic acid (g/100 g)	Acetic acid (g/100 g)	QF	LAB (CFU/g)	Yeast (CFU/g)
SD	4.46 ± 0.06^a	-0.44 ± 0.05^a	2.95 ± 0.35^a	144 ± 10^b	0.19 ± 0.03^a	0.02 ± 0.0^a	6.33	$(4.90 \pm 0.78) \times 10^{8a}$	$(6.40 \pm 0.22) \times 10^{7a}$
CSD	5.15 ± 0.18^b	-0.51 ± 0.25^a	6.80 ± 0.14^b	89 ± 8^a	0.20 ± 0.02^a	0.03 ± 0.0^b	4.33	$(4.73 \pm 0.32) \times 10^{8a}$	$(7.20 \pm 0.44) \times 10^{7a}$
CBY	Nd	nd	7.58 ± 2.79^b	72 ± 9^a	<0.01	nd			$(7.00 \pm 0.10) \times 10^{7a}$

SD: dough with sourdough and only wheat flour; CSD: dough with sourdough and made of wheat flour and cricket powder; CBY: dough with baker's yeast and made of wheat flour and cricket powder. Values in the same column with different letters (a–b) are significantly different ($p < 0.05$). nd: not determined.