

Tables (Supplementary)

Table. S1 Viability of free *L. acidophilus* & CT-CS-LA-NC at pH 2.5 at different time intervals (12, 24, and 36 hr).

Treatment	Duration	Treatment Dosage				
		0.5	1	1.5	2	2.5
<i>L. acidophilus</i>	12 hr	12.08 ±	18.27 ±	20.43 ±	25.679 ±	37.80 ±
CT-CS-LA-NC		0.10 ^a	0.12 ^a	0.11 ^b	0.10 ^b	0.21 ^a
	24 hr	1.07 ±	18.65 ±	24.94 ±	28.21 ±	36.49 ±
		0.12 ^b	0.21 ^a	0.13 ^a	0.43 ^a	0.34 ^b
<i>L. acidophilus</i>	24 hr	4.51 ±	17.51 ±	25.53 ±	34.9 ±	25.12 ±
CT-CS-LA-NC		0.21 ^a	0.38 ^b	0.18 ^a	0.26 ^a	0.16 ^a
	36 hr	2.58 ±	20.49 ±	10.97 ±	26.80 ±	23.26 ±
		0.15 ^b	0.14 ^a	0.16 ^b	0.15 ^b	0.16 ^b
<i>L. acidophilus</i>	36 hr	2.71 ±	16.93 ±	17.74 ±	33.5 ±	45 ±
CT-CS-LA-NC		0.19 ^a	0.11 ^b	0.12 ^b	0.11 ^b	0.13 ^b
	36 hr	2.38 ±	19.75 ±	25.27 ±	42.62 ±	60.93 ±
		0.13 ^a	0.20 ^a	0.21 ^a	0.21 ^a	0.68 ^a

(Values are presented as the mean ± standard error of the mean (n = 3). ^(a, b) Different letters in the same columns denote statistical significance (P < 0.05) according to Duncan's multiple range test, which was performed following a significant one-way ANOVA)

Table. S2 Viability of free *L. acidophilus* & CT-CS-LA-NC at pH 3.5 at different time intervals (12, 24, and 36 hr).

Treatment	Duration	Treatment Dosage				
		0.5	1	1.5	2	2.5
<i>L. acidophilus</i>	12 hr	5.50 ±	19.08 ±	22.70 ±	31.63 ±	53.71 ±
CT-CS-LA-NC		0.16 ^a	0.31 ^a	0.35 ^b	0.29 ^b	0.27 ^a
<i>L. acidophilus</i>	24 hr	1.93 ±	19.38 ±	25.38 ±	36.41 ±	50.23
CT-CS-LA-NC		0.18 ^b	0.26 ^a	0.16 ^a	0.34 ^a	±0.43 ^b
<i>L. acidophilus</i>	36 hr	4.85 ±	19.09 ±	17.75 ±	13.06 ±	9.80 ±
CT-CS-LA-NC		0.02 ^b	0.29 ^a	0.19 ^a	0.20 ^b	0.08 ^b
<i>L. acidophilus</i>	36 hr	5.47 ±	10.36 ±	16.78 ±	21.08 ±	36.68 ±
CT-CS-LA-NC		0.24 ^a	0.37 ^b	0.23 ^b	0.15 ^a	0.26 ^a
<i>L. acidophilus</i>	36 hr	2.22 ±	3.55 ±	41.06 ±	65.42 ±	49.1 ±
CT-CS-LA-NC		0.23 ^b	0.02 ^b	0.25 ^a	0.73 ^b	0.15 ^b
<i>L. acidophilus</i>	36 hr	3.55 ±	21.17 ±	38.88 ±	76.46 ±	55.73 ±
CT-CS-LA-NC		0.21 ^a	0.40 ^a	0.14 ^b	0.60 ^a	0.49 ^a

(Values are presented as the mean ± standard error of the mean (n = 3). ^(a, b) Different letters in the same columns denote statistical significance (P < 0.05) according to Duncan's multiple range test, which was performed following a significant one-way ANOVA)

Table. S3 Viability of free *L. acidophilus* & CT-CS-LA-NC at pH 7.5 at different time intervals (12, 24, and 36 hr).

Treatment	Duration	Treatment Dosage				
		0.5	1	1.5	2	2.5
<i>L. acidophilus</i>	12 hr	5.39 ±	10.68 ±	19.35 ±	23.47 ±	32.41 ±
CT-CS-LA-NC		0.13 ^a	0.11 ^b	0.14 ^b	0.12 ^b	0.12 ^b
<i>L. acidophilus</i>	24 hr	2.45 ±	16.32 ±	21.34 ±	27.9 ±	35.24 ±
CT-CS-LA-NC		0.12 ^b	0.21 ^a	0.13 ^a	0.43 ^a	0.34 ^a
<i>L. acidophilus</i>	36 hr	11.56 ±	21.23 ±	26.71 ±	32.18 ±	32.89 ±
CT-CS-LA-NC		0.21 ^b	0.38 ^b	0.18 ^b	0.26 ^b	0.16 ^b
<i>L. acidophilus</i>	36 hr	19.25 ±	23.62 ±	28.91 ±	36.11 ±	37.56 ±
CT-CS-LA-NC		0.15 ^a	0.14 ^a	0.16 ^a	0.15 ^a	0.16 ^a
<i>L. acidophilus</i>	36 hr	2.54 ±	12.36 ±	18.93 ±	20.10 ±	21.29 ±
CT-CS-LA-NC		0.19 ^b	0.11 ^b	0.12 ^b	0.11 ^b	0.13 ^b
<i>L. acidophilus</i>	36 hr	3.69 ±	19.25 ±	24.32 ±	36.18 ±	39.46 ±
CT-CS-LA-NC		0.13 ^a	0.20 ^a	0.21 ^a	0.21 ^a	0.68 ^a

(Values are presented as the mean \pm standard error of the mean (n = 3). ^(a, b) Different letters in the same columns denote statistical significance (P < 0.05) according to Duncan's multiple range test, which was performed following a significant one-way ANOVA)