

**Table S1.** Specific contents of three short chain fatty acids (SCFAs).

Probiotic Strain	Group	Acetic Acid (μM)	Propionic Acid (μM)	Butyric Acid (μM)	Total SCFAs (μM)
<i>L. paracasei</i>	NC	47.80 ± 6.84	5.32 ± 1.36	5.55 ± 1.75	58.67 ± 9.95
	Inulin	9.77 ± 1.60	0.52 ± 0.06	0.62 ± 0.23	10.91 ± 1.31
	PRG 0.1%	122.65 ± 128.14	5.69 ± 4.71	3.11 ± 3.44	131.44 ± 136.29
	PRG 0.5%	132.84 ± 130.40	5.45 ± 2.77	1.14 ± 0.75	139.43 ± 133.92
<i>L. plantarum</i>	NC	130.61 ± 79.54 <sup>c</sup>	6.12 ± 1.05 <sup>c</sup>	5.34 ± 2.48 <sup>a</sup>	142.07 ± 76.01 <sup>c</sup>
	Inulin	56.67 ± 8.69 <sup>d</sup>	6.46 ± 4.41 <sup>c</sup>	0.78 ± 0.35 <sup>b</sup>	63.91 ± 13.45 <sup>c</sup>
	PRG 0.1%	424.87 ± 127.5 <sup>b</sup>	15.94 ± 0.21 <sup>b</sup>	1.72 ± 0.38 <sup>b</sup>	442.53 ± 128.13 <sup>b</sup>
	PRG 0.5%	1011.87 ± 49.72 <sup>a</sup>	26.19 ± 5.62 <sup>a</sup>	2.23 ± 0.36 <sup>b</sup>	1040.29 ± 55.70 <sup>a</sup>
<i>L. lactis</i>	NC	139.49 ± 19.16 <sup>c</sup>	5.41 ± 0.23 <sup>c</sup>	2.62 ± 0.64 <sup>b</sup>	147.53 ± 18.28 <sup>c</sup>
	Inulin	75.42 ± 23.21 <sup>d</sup>	3.66 ± 0.69 <sup>c</sup>	2.34 ± 2.46 <sup>b</sup>	81.43 ± 20.06 <sup>d</sup>
	PRG 0.1%	329.81 ± 83.89 <sup>b</sup>	13.12 ± 0.33 <sup>b</sup>	7.04 ± 7.81 <sup>b</sup>	349.96 ± 91.38 <sup>b</sup>
	PRG 0.5%	768.90 ± 19.91 <sup>a</sup>	16.52 ± 0.78 <sup>a</sup>	29.54 ± 1.71 <sup>a</sup>	815.01 ± 22.39 <sup>a</sup>
<i>B. bifidum</i>	NC	54.33 ± 19.45 <sup>c</sup>	3.22 ± 1.73 <sup>b</sup>	2.27 ± 0.10 <sup>c</sup>	59.82 ± 21.08 <sup>c</sup>
	Inulin	256.81 ± 38.99 <sup>b</sup>	4.62 ± 0.22 <sup>b</sup>	7.77 ± 2.18 <sup>b</sup>	278.20 ± 40.95 <sup>b</sup>
	PRG 0.1%	269.01 ± 98.18 <sup>b</sup>	4.66 ± 3.84 <sup>b</sup>	3.76 ± 0.87 <sup>c</sup>	277.43 ± 102.90 <sup>b</sup>
	PRG 0.5%	558.33 ± 6.53 <sup>a</sup>	11.07 ± 0.12 <sup>a</sup>	39.41 ± 25.42 <sup>a</sup>	608.80 ± 19.01 <sup>a</sup>
<i>B. longum</i>	NC	73.41 ± 9.27 <sup>b</sup>	5.98 ± 0.79	2.29 ± 1.38	81.67 ± 7.11 <sup>b</sup>
	Inulin	231.93 ± 34.36 <sup>a</sup>	6.42 ± 0.40	12.82 ± 13.63	251.17 ± 48.39 <sup>a</sup>
	PRG 0.1%	264.52 ± 131.35 <sup>a</sup>	5.05 ± 0.66	9.36 ± 0.56	278.93 ± 131.24 <sup>a</sup>
	PRG 0.5%	423.68 ± 273.55 <sup>a</sup>	6.78 ± 0.78	2.45 ± 0.07	432.91 ± 274.25 <sup>a</sup>

The different letters indicate significant difference ( $p < 0.05$ ) determined by Duncan's multiple range test.