

Table S1. Metagenome study of Lactic acid bacteria species abundance in four samples of Bulgarian home-made yoghurt prepared using an artisanal starter. Yoghurt origin: Sample 1 and 2, from villages in Rila and Pirin mountains, Sample 3, from the Thracian Plain, Sample 4, from Rhodope mountain.

Species	Relative abundance (Counts)			
	Sample 1	Sample 2	Sample 3	Sample 4
<i>Lactobacillus. delbrueckii</i> subsp. <i>bulgaricus</i>	22472	2500	15626	40010
<i>Streptococcus thermophilus</i>	10544	24249	18569	3603
<i>Pediococcus acidilactici</i>	314		649	-
<i>Lactococcus lactis</i>	98	4546	-	-
<i>Lactococcus taiwanensis</i>	-	3	-	-
<i>Streptococcus salivisoluxodontae</i>	-	24	-	-
<i>Leuconostoc lactis</i>	-	116	-	-
<i>Lactococcus garvieae</i>	-	414	-	-
<i>Lactobacillus equicursoris</i>	78	0	208	175
<i>Lacticaseibacillus rhamnosus</i>	716	-	-	-
<i>Lactobacillus helveticus</i>	-	450	804	-
<i>Limosilactobacillus fermentum</i>	-	-	657	606
<i>Lacticaseibacillus paracasei</i>	-	395	-	524
<i>Leuc. pseudomesenteroides</i>	-	314	-	-
<i>Leuc. mesenteroides</i>	-	188	-	-

Table S2. Metagenome study of contaminant microflora species abundance in four samples of Bulgarian home-made yoghurt prepared using an artisanal starter. Yoghurt origin: Sample 1 and 2, from villages in Rila and Pirin mountains, Sample 3, from the Thracian Plain, Sample 4, from Rhodope mountain.

Species	Relative abundance (Counts)			
	Sample 1	Sample 2	Sample 3	Sample 4
<i>Acinetobacter johnsonii</i>	7	6	-	4
<i>Citrobacter europaeus</i>	7	3	-	-
<i>Acinetobacter guillouiae</i>	6	1	-	1
<i>Acinetobacter ursingii</i>	4	-	-	-
<i>Moraxella osloensis</i>	9	9	-	6
<i>Pseudomonas japonica</i>	2	-	-	-
<i>Alcaligenes aquatilis</i>	9	-	-	3
<i>Bacteroides graminisolvens</i>	12	-	1	-
<i>Serratia nematodiphila</i>	3	-	-	-
<i>Acinetobacter beijerinckii</i>	4	-	-	-
<i>Chryseobacterium hominis</i>	3	-	-	-
<i>Stenotrophomonas nitritireducens</i>	1	-	-	-
<i>Comamonas testosteroni</i>	1	-	-	-
<i>Rummeliibacillus suwonensis</i>	1	-	-	-
<i>Acidovorax facilis</i>	1	-	-	-
<i>Aeromonas salmonicida</i>	-	4	-	-
<i>Streptococcus ruminantium</i>	-	3	0	-

Table S3. LC-MS (Liquid chromatography/Mass spectrometry) analysis of the valuable metabolites produced by the accompanying LAB strains to produce valuable metabolites, single-strains fermented yoghurts were subjected to LC-MS analysis carried out on Q Exactive® mass analyzer equipped with TurboFlow® LC system and APCI atmospheric pressure electrospray ionization module. Data acquisition and processing were carried out with Xcalibur 2.4® software package.

Metabolite	Mw	Area											
		<i>Lb. helveticus</i> 16	<i>Str. thermophilus</i> 21	<i>Lb. helveticus</i> 22	<i>Str. thermophilus</i> 23	<i>Leuc. paramesenteroides</i> 24	<i>Lb. paracasei</i> 25	<i>P. acidilactici</i> 27	<i>Lb. fermentum</i> 28	<i>Leuc. mesenteroides</i> 33	<i>Lb. fermentum</i> 39	<i>Lb. paracasei</i> 47	<i>Lb. rhamnosus</i> 30.3
L-Tryptophan	204	1521570	2791698	295892	91869.75	20383.5	4323901	1230606	2446201	1225202	1523029	89096.15	1760069
L-Histidine	155	14123470	16485108	26391210	14459314	17404279	20641962	15781878	10614204	9369251	7941420	23962838	4141171
DL-Arginine	174	54433757	4339.355	55755580	670039.3	94694.69	6580343	444810.1	146337.8	127419.9	76255.23	111472	13406726
Indole-3-propionic acid	187	436301.3	3829126	5625663	2822401	7313980	1605092	3649597	2076300	1462594	1551838	164053	1761075
L-(+)-Citrulline	175	160830.8	70136.92	1590489	199079.8	90007.27	1011321	38671.63	31410.52	8620.157	354238.5	26270.4	27592.76
L-Lysine	146	14951833	4340.391	7351.831	35495.66	5130.626	25067265	32025157	28863206	12658176	16568412	22891826	7992908
Cyclo(phenylalanyl-prolyl)	244	105762	729756	96012	190836	885041	155780	576287	622378	7177	12302	142128	89582
Cyclo(leucyl-prolyl)	210	178223	424257	222910	359716	282765	309454	655805	1149367	528261	2190280	313936	107857