

**Supplementary Table 1.** Composition of probiotic products with viable counts

Brand name	Origin of the product	Name of organisms	Viable count (cfu/gm)
Brand 1	USA	<i>Lactobacillus acidophilus</i>	6×10 <sup>10</sup> cfu/kg
		<i>Bacillus subtilis</i>	
		<i>Bifidobacterium longum</i>	
Brand 2	India	<i>Lactobacillus acidophilus</i>	4×10 <sup>8</sup>
		<i>Bacillus subtilis</i>	1×10 <sup>9</sup>
		<i>Pediococcus acidilactici</i>	1×10 <sup>8</sup>
		<i>Saccharomyces cerevisiae</i>	1×10 <sup>8</sup>
		<i>Streptomyces spp.</i>	5×10 <sup>7</sup>
Brand 3	Austria	<i>Lactobacillus acidophilus</i>	2×10 <sup>9</sup>
		<i>Lactobacillus bulgaricus</i>	
		<i>Lactobacillus rhamnosus</i>	
		<i>Lactobacillus plantarum</i>	
		<i>Bifidobacterium bifidum</i>	
		<i>Streptococcus thermophilus</i>	
		<i>Enterococcus faecium</i>	
Brand 4	Korea	<i>Lactobacillus acidophilus</i>	6×10 <sup>9</sup>
		<i>Bifidobacterium bifidum</i>	1×10 <sup>9</sup>
		<i>Saccharomyces boulardii</i>	2×10 <sup>9</sup>
		<i>Aspergillus oryzae</i>	1×10 <sup>9</sup>
Brand 5	UK	<i>Lactobacillus acidophilus</i>	7×10 <sup>9</sup>
		<i>Lactobacillus plantarum</i>	
		<i>Bacillus subtilis</i>	3×10 <sup>9</sup>
		<i>Enterococcus faecium</i>	1×10 <sup>2</sup>
Brand 6	Taiwan	<i>Lactobacillus acidophilus</i>	5×10 <sup>12</sup>
		<i>Lactobacillus reuteri</i>	5×10 <sup>12</sup>
		<i>Lactobacillus salivarius</i>	5×10 <sup>12</sup>
		<i>Enterococcus faecium</i>	5×10 <sup>12</sup>
		<i>Pediococcus acidilactici</i>	5×10 <sup>12</sup>
Brand 7	China	<i>Lactobacillus acidophilus</i>	Not specified
		<i>Lactobacillus plantarum</i>	Not specified
		<i>Bacillus subtilis</i>	Not specified
		<i>Bacillus licheniformis</i>	2×10 <sup>8</sup>
		<i>Saccharomyces cerevisiae</i>	2×10 <sup>8</sup>

**Supplementary Table 2.** List of antimicrobials used for antimicrobial susceptibility testing

SN	Antimicrobial classes	Antimicrobial agents	Disc <sup>§</sup> content (µg)	Interpretation criteria used
1	Penicillin	Penicillin-G (P)	10 units	EUCAST
		Ampicillin (AM)	10	EUCAST
		Amoxicillin (AX)	10	CLSI
		Oxacillin (OX)	1	EUCAST
2	Cephalosporin	Cefuroxime (CXM)	30	EUCAST
		Cefotaxime (CTX)	30	EUCAST
		Cefepime (FEP)	30	EUCAST
		Cefepime (FEP)	30	EUCAST
3	Cephameycins	Cefoxitin (FOX)	30	EUCAST
4	Fluoroquinolones	Nalidixic acid (NA)	30	CLSI
		Ciprofloxacin (CIP)	5	CLSI
		Levofloxacin (LEV)	5	CLSI
		Ofloxacin (OFX)	5	EUCAST
5	Carbapenem	Meropenem (MEM)	10	EUCAST
6	Tetracycline	Tetracycline (TE)	30	CLSI
7	Macrolides	Erythromycin (E)	15	CLSI
8	Glycopeptide and lipoglycopeptide	Vancomycin (VA)	30	CLSI
9	Lincosamides	Clindamycin (DA)	2	CLSI
10	Oxazolidinone	Linezolid (LNZ)	30	EUCAST

<sup>§</sup>The antimicrobial discs were purchased from Biomaxima, Poland.

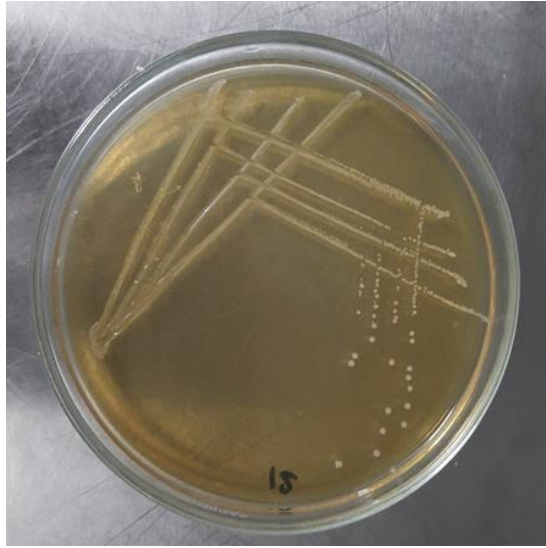
**Supplementary Table 3.** Oligonucleotide primers used for the detection of  $\beta$ -lactamase (BSBL, and ESBL), PMQR and tetracycline resistance genes

Genes	Primers	Sequences 5'→3'	Size (bp)	References
BSBL-encoding genes				
<i>bla</i> TEM	TEM-410F TEM-781R	GGTCGCCGCATACACTATTCTC TTTATCCGCCTCCATCCAGTC	372	(Le et al., 2015)
<i>bla</i> SHV	SHV-287F SHV-517R	CCAGCAGGATCTGGTGGACTAC CCGGGAAGCGCCTCAT	231	
ESBL-encoding genes				
<i>bla</i> CTX-M-1	ctxm1-15F ctxm1-02R	GAATTAGAGCGGCAGTCGGG CACAACCCAGGAAGCAGGC	588	
<i>bla</i> CTX-M-2	ctxm2-39F ctxm2-45R	GATGGCGACGCTACCCC CAAGCCGACCTCCCGAAC	107	
PMQR-encoding genes				
<i>qnr</i> A	qnrA-F qnrA-R	ATTTCTCACGCCAGGATTTG GATCGGCAAAGGTTAGGTCA	516	(Robicsek et al., 2006)
<i>qnr</i> B	qnrB-F qnrB-R	GATCGTGAAAGCCAGAAAGG ACGATGCCTGGTAGTTGTCC	469	
<i>qnr</i> S	qnrS-F qnrS-R	ACGACATTCGTCAACTGCAA TAAATTGGCACCTGTAGGC	417	
Tetracycline resistance genes				
<i>tet</i> A	tetA-L tetA-R	GGCGGTCTTCTTCATCATGC CGGCAGGCAGAGCAAGTAGA	502	(Goswami et al., 2008)
<i>tet</i> B	tetBGK-L2 tetBGK-R2	CGCCCAGTGCTGTTGTTGTC CGCGTTGAGAAGCTGAGGTG	173	

BSBL = Broad-spectrum  $\beta$ -lactamase; ESBL = Extended-spectrum  $\beta$ -lactamase; PMQR = Plasmid-mediated quinolones resistance.

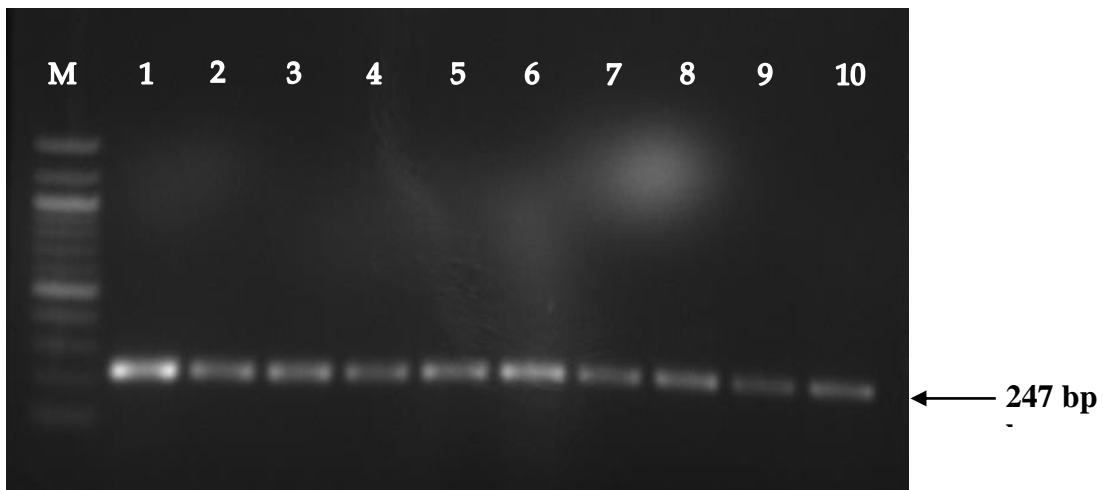


**Supplementary Fig. 1.** Round, creamy white colonies of *Lactobacillus* spp. on MRS agar.



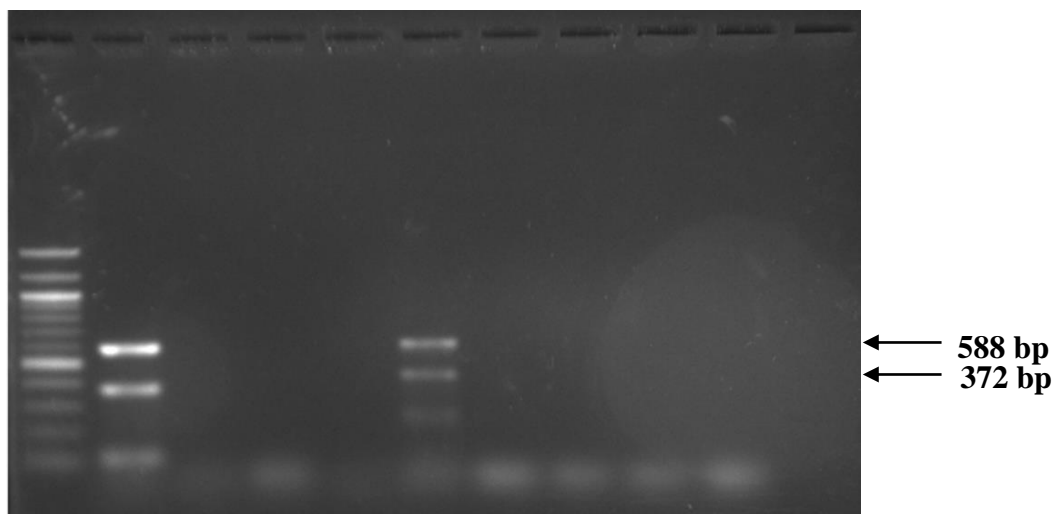
**Supplementary Fig. 2.** PCR amplified products of 247 bp of 16s rRNA gene of *Lactobacillus* spp. on 1.5% agarose gel.

**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-10 = PCR products of *Lactobacillus* spp. isolates



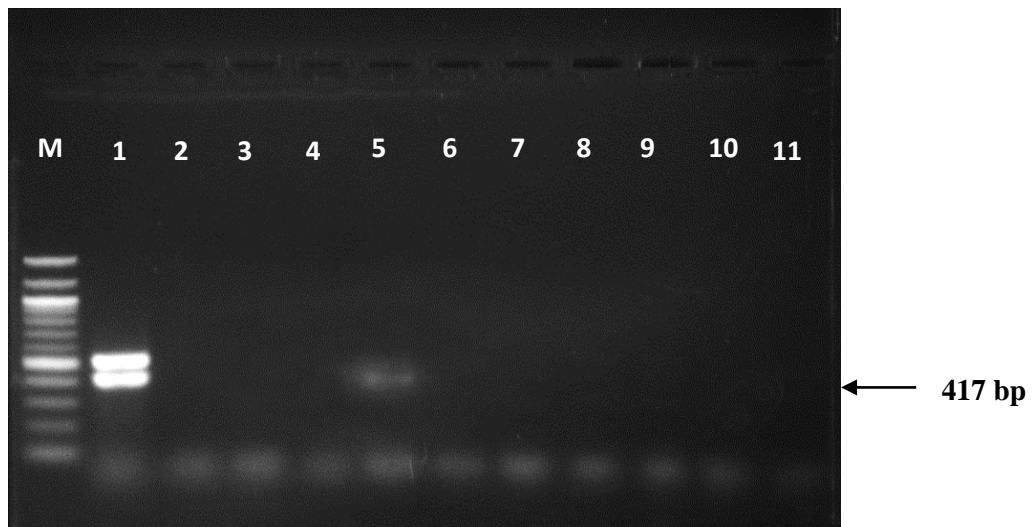
**Supplementary Fig. 3.** Detection of  $\beta$ -lactamase genes (*bla*CTX-M-1, 588 bp; *bla*TEM, 372 bp) in *Lactobacillus* spp. (Lane 5=Ep4) isolated from pharmaceutical products by multiplex PCR.

**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-9 = PCR products of *Lactobacillus* spp. isolates.



**Supplementary Fig. 4 (a).** Detection of PMQR gene (*qnrS*, 417 bp) in *Lactobacillus* spp. (Lane 5=Ep4) isolated from pharmaceutical products by multiplex PCR.

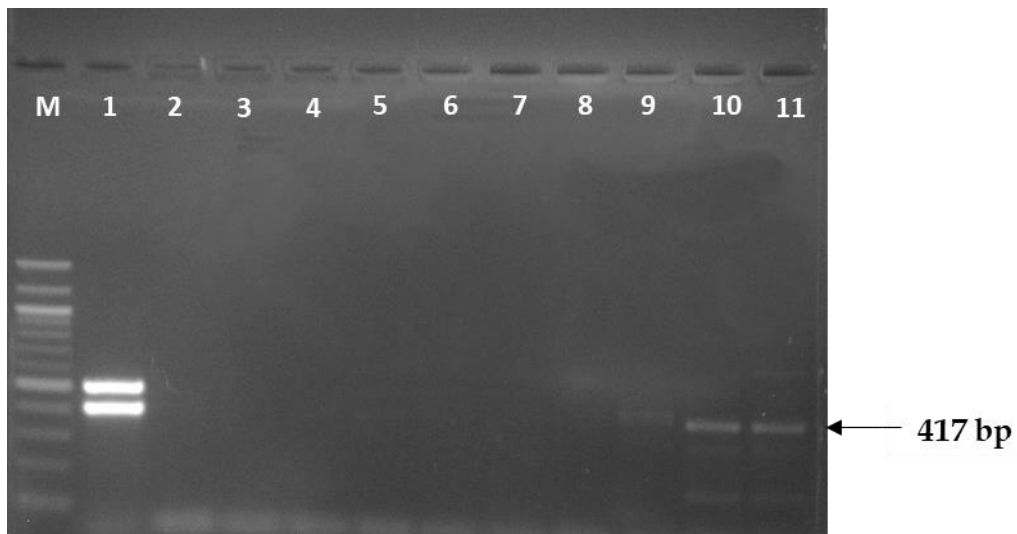
**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-11 = PCR products of *Lactobacillus* spp. isolates.





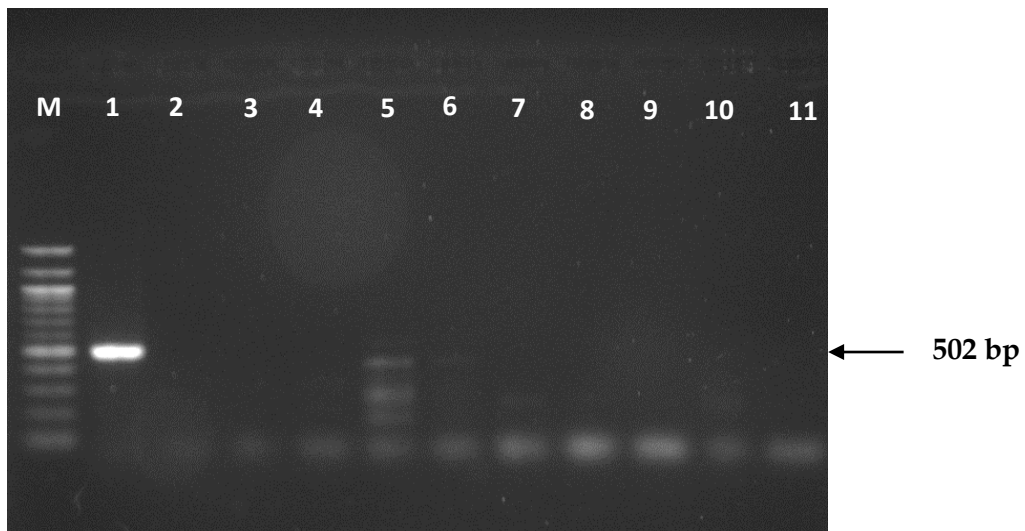
**Supplementary Fig. 4 (b).** Detection of PMQR gene (*qnrS*, 417 bp) in *Lactobacillus* spp. (Lane 9=Pb3, 10=Pb4, 11=Pb5) isolated from pharmaceutical products by multiplex PCR.

**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-11 = PCR products of *Lactobacillus* spp. isolates.



**Supplementary Fig. 5 (a).** Detection of tetracycline resistance gene (*tetA*, 502 bp) in *Lactobacillus* spp. (Lane 5=Ep4) isolated from pharmaceutical products by multiplex PCR.

**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-11 = PCR products of *Lactobacillus* spp. isolates.



**Supplementary Fig. 5 (b).** Detection of tetracycline resistance genes (*tetB*, 173 bp) in *Lactobacillus* spp. (Lane 10=Pb4, 11=Pb5) isolated from pharmaceutical products by multiplex PCR.

**Legends:** M = DNA marker (100 bp), Lane 1 = Positive control, Lane 2-11 = PCR products of *Lactobacillus* spp. isolates.

