

1 Supporting Information

2 Table S1. Plant included in this study

Common name	Latin name	Part of the plant used	Harvesting month
Squaw mint	<i>Mentha pulegium</i>	leaves	July
Catnip	<i>Nepeta cataria</i>	stem, leaves, inflorescences	May
Lemon balm	<i>Melissa officinalis</i>	stem, leaves, inflorescences	August
Anise hyssop	<i>Agastache foeniculum</i>	stem, leaves, inflorescences	August
Lavender	<i>Lavandula angustifolia</i>	inflorescences	August
Oregano	<i>Origanum vulgare</i>	inflorescences	September
Marsh mallow	<i>Althaea officinalis</i>	inflorescences	July
Narrowleaf plantain	<i>Plantago lanceolate</i>	leaves	May
Absinthe wormwood	<i>Artemisia absinthium</i>	inflorescences	August
Black poplar buds	<i>Populus nigra</i>	buds	April
Plum lichen	<i>Evernia prunastri</i>	lichen	May

3

4 Table S2. The bacterial strains included in the study

Species	Gram	Identification (API test and code)	Origin
<i>Aeromonas hydrophila/caviae</i>	G-	API 20 NE V7.0, 5 4 7 7 7 4 4	Milk
<i>Bacillus cereus</i>	G+	API 50 CHB , 7212	Milk
<i>Enterobacter intermedius</i>	G-	API 20 E V4.1, 1 1 0 4 5 7 2	Milk
<i>Escherichia coli 1,</i>	G-	API 20 E, 7 1 0 4 5 7 2	Milk
<i>Escherichia coli 1,</i>	G-	API 20 E, 7 1 0 4 5 7 2	Milk
<i>Kytococcus sedentarius</i>	G+	API Staph, 0 0 1 0 0 0 0	Milk
<i>Lactococcus lactis</i>	G+	API 20 STREP, 7 0 0 5 5 1 1	Milk
<i>Lactococcus lactis</i>	G+	API 20 STREP, 7 0 0 5 5 1 1	Milk
<i>Serratia liquefaciens</i>	G-	API 20 E V4.1, 7 1 0 6 1 6 2	Milk
<i>Serratia liquefaciens</i>	G-	API 20 E V4.1, 6 1 0 6 1 6 1	Milk
<i>Staphylococcus aureus</i>	G+	ATCC 6538P	Reference
<i>Staphylococcus chromogenes</i>	G+	API Staph, 6712052	Milk
<i>Staphylococcus hyicus</i>	G+	API Staph V4.1, 6 7 3 2 1 5 3	Milk
<i>Staphylococcus intermedius</i>	G+	API Staph V4.1, 6 7 3 0 1 5 1	Milk
<i>Staphylococcus intermedius</i>	G+	API Staph V4.1, 6 7 3 0 1 5 1	Milk
<i>Staphylococcus intermedius</i>	G+	API Staph V4.1, 6 7 3 0 1 5 1	Milk
<i>Staphylococcus intermedius</i>	G+	API Staph V4.1, 6 7 3 0 1 5 1	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph, 6 7 3 2 4 5 2	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph, 6 7 3 2 4 5 2	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph, 6 7 3 2 4 5 2	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph V4.1, 6 7 7 3 1 5 1	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph V4.1, 6 7 7 3 1 5 1	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph V4.1, 6 7 3 2 5 5 3	Milk
<i>Staphylococcus xylosus</i>	G+	API Staph V4.1, 6 7 3 2 5 5 3	Milk
<i>Vibrio fluvialis</i>	G-	API 20 E V4.1, 6 1 0 6 1 2 0	Milk
<i>Vibrio fluvialis</i>	G-	API 20 E V4.1, 6 1 0 6 1 2 0	Milk

<i>Vibrio fluvialis</i>	G-	API NE, 7 1 1 6 1 2 2	Milk
<i>Vibrio fluvialis</i>	G-	API NE, 7 1 1 6 1 2 2	Milk
<i>Vibrio fluvialis</i>	G-	API NE, 7 1 1 6 1 2 2	Milk
<i>Vibrio fluvialis</i>	G-	API NE, 7 1 1 6 1 2 2	Milk
<i>Vibrio fluvialis</i>	G-	API 20 NE V7.0, 7 5 7 2 7 4 4	Milk
<i>Yersinia ruckeri</i>	G-	API 20 E V4.1; 6 1 0 4 1 2 0	Milk

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7 Table S3. The recipe of biological products (100g)

Recipe	Active ingredients (g)	Excipients
R1	Propolis aq. 3, hops al. 2, plum lichen al. 7, lavender al. 4, black poplar buds al. 3, sage al. 3, marigold al. 4, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	Xanthan gum (E 415) and water in a ratio of 1 to 200, Cosgard 0.6g
R2	Propolis aq. 10, <i>Magnum</i> hops al. 3, plum lichen al. 5, lavender al. 2, black poplar buds al. 4, sage al. 3, marigold al. 2, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R3	Propolis aq. 3, <i>Brewers Gold</i> hops al. 3, hops pearls al. 3, plum lichen al. 5, common mallow al. 2, marigold al. 2, absinthe wormwood al. 5, black poplar buds al. 3, lemon balm al. 3, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R4	Propolis aq. 5, <i>Brewers Gold</i> hops al. 2, hops pearls al. 2, plum lichen al. 3, common mallow al. 2, marigold al. 3, absinthe wormwood al. 7, black poplar buds al. 5, lemon balm al. 2, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R5	Propolis aq. 7, hops al. 5, plum lichen al. 7, lavender al. 5, black poplar buds al. 7, sage al. 5, marigold al. 3, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R6	Propolis aq. 10, hops al. 5, plum lichen al. 4, lavender al. 6, black poplar buds al. 5, sage al. 6, marigold al. 3, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R7	Propolis aq. 7, <i>Brewers Gold</i> hops al. 3, hops pearls al. 3, plum lichen al. 5, common mallow al. 2, marigold al. 2, absinthe wormwood al. 8, black poplar buds al. 6, lemon balm al. 3, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	
R8	Propolis aq. 5, <i>Brewers Gold</i> hops al. 3, hops pearls al. 3, plum lichen al. 7, common mallow al. 2, marigold al. 2, absinthe wormwood al. 8, black poplar buds al. 5, lemon balm al. 4, oregano eo. 0.09, lavender eo. 0.09, rosemary eo. 0.09.	

8 Aq.- aqueous extract; al.- alcoholic extract; eo.- essential oil