

Supplementary Table S1. Experimental variables and responses used in the mixture design.

Runs	Variables			MIC <i>S. aureus</i> (µg/mL)		MIC <i>S. enterica</i> (µg/mL)		MIC <i>E. coli</i> (µg/mL)		MIC <i>L. monocytogenes</i> (µg/mL)	
	Linalool (A)	Eucalyptol (B)	Camphor (C)	Exp.	Pred.	Exp.	Pred.	Exp.	Pred.	Exp.	Pred.
1	1.000	0.000	0.000	168±6.765 ^d	168.40	168±8.25 ^d	173.40	168±7.84 ^c	186.60	168±7.755 ^e	155.70
2	0.000	1.000	0.000	168±6.765 ^d	195.90	168±8.25 ^d	187.60	168±7.84 ^c	197.80	168±7.755 ^e	159.50
3	0.000	0.000	1.000	168±6.765 ^d	161.00	168±8.25 ^d	162.20	168±7.00 ^c	181.40	168±7.755 ^e	176.10
4	0.500	0.500	0.000	42±1.681 ^b	34.275	42±2.05 ^b	40.97	84±3.28 ^b	74.40	84±3.854 ^d	76.20
5	0.500	0.000	0.500	84±3.362 ^c	93.325	10.5±0.50 ^a	15.60	42±1.64 ^a	49.02	84±3.854 ^d	83.82
6	0.000	0.500	0.500	84±3.362 ^c	77.90	42±2.05 ^b	39.77	42±1.64 ^a	40.22	42±1.927 ^c	46.57
7	0.333	0.333	0.333	21±0.861 ^a	23.34	42±2.05 ^b	49.27	42±1.64 ^a	38.90	10.5±0.470 ^a	13.33
8	0.6667	0.1667	0.1667	42±1.681 ^b	55.54	84±4.10 ^c	78.10	42±1.64 ^a	41.02	21±0.987 ^b	29.60
9	0.1667	0.6667	0.1667	42±1.681 ^b	55.44	42±2.05 ^b	37.55	84±3.28 ^b	78.33	21±0.987 ^b	28.44
10	0.1667	0.1667	0.6667	42±1.681 ^b	49.80	42±2.05 ^b	40.63	84±3.28 ^b	87.51	84±3.854 ^d	79.52

Exp: Experimental, Pred: Predicted. For each run, responses with different letters are significantly different (one-way analysis of variance, $p < 0.05$; Tukey's test), \pm standard deviation (SD) of three measurements.

Supplementary Table S2. ANOVA results of regression models from mixture design for MICs optimization

Source	DF	Seq SS	Adj SS	Adj MS	F-value	<i>p</i> -value
<i>S. aureus</i>						
Regression	6	33809.2	33809.2	5634.9	5.93	0.086
Linear	2	446.3	744.9	372.5	0.39	0.706
Quadratic	3	33354.7	21038.4	7012.8	7.38	0.067
A × B	1	17760.7	14773.8	14773.8	15.55	0.029
A × C	1	7173.6	5884.5	5884.5	6.19	0.089
B × C	1	8420.3	6831.3	6831.3	7.19	0.075
Special cubic	1	8.2	8.2	8.2	0.01	0.932
A × B × C	1	8.2	8.2	8.2	0.01	0.932
Residual Error	3	2850.9	2850.9	950.3		
Total	9	36660.1				
<i>S. enterica</i>						
Regression	6	37765.8	37765.8	6294.3	10.51	0.040
Linear	2	724.1	355.5	177.7	0.30	0.763
Quadratic	3	34211.1	32108.2	10702.7	17.87	0.020
A × B	1	10103.9	13154.3	13154.3	21.97	0.018
A × C	1	12682.2	15654.2	15654.2	26.14	0.014
B × C	1	11425	14229.7	14229.7	23.76	0.016
Special cubic	1	2830.7	2830.7	2830.7	4.73	0.118
A × B × C	1	2830.7	2830.7	2830.7	4.73	0.118
Residual Error	3	1796.6	1796.6	598.9		
Total	9	39562.4				
<i>E. coli</i>						
Regression	6	35114.3	35114.3	5852.4	11.83	0.034
Linear	2	434.8	153.9	76.9	0.16	0.862
Quadratic	3	34429.6	24644.8	8214.9	16.6	0.023
A × B	1	9525	9375.2	9375.2	18.95	0.022
A × C	1	12939	12309.8	12309.8	24.88	0.015
B × C	1	11965.6	11311.1	11311.1	22.86	0.017

Special cubic	1	249.9	249.9	249.2	0.51	0.529
A × B × C	1	249.9	249.9	249.9	0.51	0.529
Residual Error	3	1484.6	1484.6	494.9		
Total	9	36598.9				
<i>L. monocytogenes</i>						
Regression	6	32059.3	32059.3	5343.22	5.54	0.094
Linear	2	322.3	258.6	129.31	0.13	0.880
Quadratic	3	30903	15175	5058.33	5.24	0.103
A × B	1	8638.8	5521.6	5521.57	5.72	0.097
A × C	1	7392.9	4552.2	4552.15	4.72	0.118
B × C	1	14871.2	9928.2	9928.15	10.29	0.049
Special cubic	1	834	834	834.01	0.86	0.421
A × B × C	1	834	834	834.01	0.86	0.421
Residual Error	3	2895.1	2895.1	965.02		
Total	9	34954.4				