

Table S1. Checkerboard analysis with final interactions when the essential oil concentration is expressed in mg/mL instead % v/v (best match within triplicate; differences to Table 3. are highlighted in **bold** and **red**).

antimicrobial agent	patchouli oil				tea tree oil			
	MIC _i	MIC _c	FIC	ΣFIC [interaction]	MIC _i	MIC _c	FIC	ΣFIC [interaction]
<i>Staphylococcus aureus</i> ATCC 25923								
oil (mg/mL)	2.4	0.08	0.033	0.283	22.4	0.7	0.031	0.281
gentamicin (µg/mL)	1	0.25	0.25	synergy	1	0.25	0.25	synergy
oil (mg/mL)	1.2	1.2	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	0.125	0.125	1	none	0.125	0.125	1	none
<i>Staphylococcus aureus</i> Sa 1								
oil (mg/mL)	4.8	1.2	0.25	0.75	44.8	11.2	0.25	0.5
gentamicin (µg/mL)	2	1	0.5	additive	0.5	0.125	0.25	synergy
oil (mg/mL)	4.8	2.4	0.5	1.0	44.8	11.2	0.25	0.375
enrofloxacin (µg/mL)	8	4	0.5	additive	8	1	0.125	synergy
<i>Staphylococcus aureus</i> Sa 2								
oil (mg/mL)	4.8	1.2	0.25	0.75	89.6	11.2	0.125	0.25
gentamicin (µg/mL)	1	0.5	0.5	additive	0.5	0.0625	0.125	synergy
oil (mg/mL)	2.4	2.4	1	2.0	44.8	44.8	1	2.0
enrofloxacin (µg/mL)	4	4	1	none	4	4	1	none
<i>Staphylococcus aureus</i> Sa 3								
oil (mg/mL)	4.8	1.2	0.25	0.5	22.4	5.6	0.25	0.5
gentamicin (µg/mL)	16	4	0.25	synergy	8	2	0.25	synergy
oil (mg/mL)	2.4	2.4	1	2.0	44.8	44.8	1	2.0
enrofloxacin (µg/mL)	32	32	1	none	32	32	1	none
<i>Staphylococcus aureus</i> Sa 4								
oil (mg/mL)	2.4	1.2	0.5	0.625	22.4	2.8	0.125	0.250
gentamicin (µg/mL)	0.5	0.0625	0.125	additive	0.5	0.0625	0.125	synergy
oil (mg/mL)	2.4	2.4	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	0.25	0.25	1	none	0.125	0.125	1	none
<i>Staphylococcus aureus</i> Sa 5								
oil (mg/mL)	2.4	0.6	0.25	0.75	22.4	5.6	0.25	0.378
gentamicin (µg/mL)	0.25	0.125	0.5	additive	0.25	0.032	0.128	synergy
oil (mg/mL)	2.4	2.4	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	1	1	1	none	0.5	0.5	1	none
<i>Staphylococcus aureus</i> Sa 6								
oil (mg/mL)	1.2	0.15	0.125	0.381	11.2	1.4	0.125	0.253
gentamicin (µg/mL)	0.125	0.032	0.256	synergy	0.125	0.016	0.128	synergy
oil (mg/mL)	1.2	0.3	0.250	0.750	11.2	5.6	0.5	1.0
enrofloxacin (µg/mL)	0.125	0.0625	0.5	additive	0.125	0.0625	0.5	additive
<i>Staphylococcus aureus</i> Sa 7								
oil (mg/mL)	2.4	0.6	0.25	0.506	11.2	2.8	0.250	0.762
gentamicin (µg/mL)	0.125	0.032	0.256	additive	0.0625	0.032	0.512	additive
oil (mg/mL)	1.2	0.6	0.5	1.012	5.6	5.6	1	2.0
enrofloxacin (µg/mL)	0.0625	0.032	0.512	additive	0.125	0.125	1	none
<i>Staphylococcus pseudintermedius</i> ED99								
oil (mg/mL)	2.4	0.3	0.125		22.4	2.8	0.125	

antimicrobial agent	patchouli oil				tea tree oil			
	MIC _i	MIC _c	FIC	ΣFIC [interaction]	MIC _i	MIC _c	FIC	ΣFIC [interaction]
gentamicin (µg/mL)	0.5	0.032	0.064	0.189	0.5	0.064	0.128	0.253
oil (mg/mL)	1.2	0.08	0.067	0.567	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	0.25	0.125	0.5	additive	0.125	0.125	1	none
<i>Staphylococcus pseudintermedius</i> Sps 1								
oil (mg/mL)	4.8	0.6	0.125	0.375	44.8	5.6	0.125	0.375
gentamicin (µg/mL)	64	16	0.25	synergy	32	8	0.25	synergy
oil (mg/mL)	2.4	0.15	0.0625	0.563	11.2	0.7	0.0625	0.313
enrofloxacin (µg/mL)	32	16	0.5	additive	64	16	0.25	synergy
<i>Staphylococcus pseudintermedius</i> Sps 2								
oil (mg/mL)	4.8	1.2	0.25	0.75	11.2	1.4	0.125	0.375
gentamicin (µg/mL)	64	32	0.5	additive	32	8	0.25	synergy
oil (mg/mL)	2.4	0.15	0.0625	0.563	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	64	32	0.5	additive	64	64	1	none
<i>Staphylococcus pseudintermedius</i> Sps 3								
oil (mg/mL)	4.8	2.4	0.5	0.625	11.2	1.4	0.125	0.188
gentamicin (µg/mL)	128	16	0.125	additive	64	4	0.0625	synergy
oil (mg/mL)	4.8	0.3	0.0625	0.563	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	64	32	0.5	additive	64	64	1	none
<i>Staphylococcus pseudintermedius</i> Sps 4								
oil (mg/mL)	4.8	1.2	0.25	0.5	5.6	1.4	0.250	0.375
gentamicin (µg/mL)	64	16	0.25	synergy	32	4	0.125	synergy
oil (mg/mL)	4.8	4.8	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	32	32	1	none	64	64	1	none
<i>Staphylococcus pseudintermedius</i> Sps 5								
oil (mg/mL)	4.8	1.2	0.25	0.5	44.8	11.2	0.25	0.281
gentamicin (µg/mL)	256	64	0.25	synergy	128	4	0.031	synergy
oil (mg/mL)	4.8	0.3	0.0625	0.563	11.2	5.6	0.5	1.0
enrofloxacin (µg/mL)	64	32	0.5	additive	64	32	0.5	additive
<i>Staphylococcus pseudintermedius</i> Sps 6								
oil (mg/mL)	4.8	2.4	0.5	0.75	22.4	2.8	0.125	0.156
gentamicin (µg/mL)	128	32	0.25	additive	64	2	0.031	synergy
oil (mg/mL)	4.8	4.8	1	2.0	22.4	22.4	1	3.0
enrofloxacin (µg/mL)	32	32	1	none	64	128	2	none
<i>Staphylococcus pseudintermedius</i> Sps 7								
oil (mg/mL)	4.8	2.4	0.5	1	5.6	1.4	0.250	0.375
gentamicin (µg/mL)	128	64	0.5	additive	32	4	0.125	synergy
oil (mg/mL)	4.8	0.08	0.016	0.516	11.2	5.6	0.5	1.0
enrofloxacin (µg/mL)	64	32	0.5	additive	128	64	0.5	additive
<i>Staphylococcus pseudintermedius</i> Sps 8								
oil (mg/mL)	4.8	1.2	0.25	0.75	11.2	1.4	0.125	0.188
gentamicin (µg/mL)	128	64	0.5	additive	64	4	0.0625	synergy
oil (mg/mL)	4.8	4.8	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	64	64	1	none	64	64	1	none
<i>Staphylococcus pseudintermedius</i> Sps 9								
oil (mg/mL)	4.8	1.2	0.25		44.8	11.2	0.25	

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	MIC _i	MIC _c	FIC	ΣFIC [interaction]	MIC _i	MIC _c	FIC	ΣFIC [interaction]
gentamicin (µg/mL)	64	8	0.125	0.375	32	4	0.125	0.375
oil (mg/mL)	4.8	4.8	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	0.125	0.125	1	none	0.125	0.125	1	none
<i>Staphylococcus pseudintermedius</i> Sps 10								
oil (mg/mL)	4.8	1.2	0.25	0.506	11.2	2.8	0.250	0.506
gentamicin (µg/mL)	0.125	0.032	0.256	additive	0.0625	0.016	0.256	additive
oil (mg/mL)	4.8	4.8	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	64	64	1	none	32	32	1	none
<i>Staphylococcus pseudintermedius</i> Sps 11								
oil (mg/mL)	4.8	2.4	0.5	0.75	22.4	5.6	0.25	0.378
gentamicin (µg/mL)	0.5	0.125	0.25	additive	0.125	0.016	0.128	synergy
oil (mg/mL)	4.8	4.8	1	2.0	5.6	5.6	1	2.0
enrofloxacin (µg/mL)	0.125	0.125	1	none	0.125	0.125	1	none
<i>Staphylococcus pseudintermedius</i> Sps 12								
oil (mg/mL)	4.8	2.4	0.5	0.75	44.8	11.2	0.25	0.5
gentamicin (µg/mL)	32	8	0.25	additive	8	2	0.25	synergy
oil (mg/mL)	4.8	4.8	1	2.0	11.2	11.2	1	2.0
enrofloxacin (µg/mL)	0.5	0.5	1	none	0.5	0.5	1	none

Sa – *Staphylococcus aureus*; Sps – *Staphylococcus pseudintermedius*

MIC_i: MIC individually as MIC^(O) or MIC^(A); MIC_c: MIC in combination as MIC^(OxA) or MIC^(AxO); FIC: Fractional Inhibitory Concentrations

none = noninteractive