

Table 2. Odor threshold levels of different aromatic extracts of mellisa added to sunflower oil.

Concentration (ppm)	WD extract		SD extract		AO extract	
	Odor score	Difference detection	Odor score	Difference detection	Odor score	Difference detection
100	0.0 ^e ± 0.0*	none	0.0 ^d ± 0.0	none	0.0 ^d ± 0.0	none
200	0.0 ^e ± 0.0	none	0.0 ^d ± 0.0	none	0.0 ^d ± 0.0	none
400	0.0 ^e ± 0.0	none	0.0 ^d ± 0.0	none	0.0 ^d ± 0.0	none
600	0.6 ^d ± 0.17	none	0.4 ^c ± 0.13	none	0.0 ^d ± 0.0	none
800	0.9 ^c ± 0.19	none	0.6 ^c ± 0.21	none	0.8 ^c ± 0.12	weak
1000	1.5 ^b ± 0.22	weak	1.2 ^b ± 0.19	weak	2.5 ^b ± 0.22	medium
1500	2.1 ^a ± 0.29	medium	1.5 ^a ± 0.14	medium	3.5 ^a ± 0.31	strong
L.S.D value	0.19	-	0.18	-	0.21	-

Threshold level represents the minimum concentration at which a stimulus is easily characterized.

Odor intensity was described according to the following scale: 0.0, none , 1.0 (odor different from control), 2.0 (medium) and 3.0 (strong).

*Standard deviations.

Table 4. Antimicrobial activity of different aromatic extracts of melissa

Microbial strains	Zone of inhibition (mm)																	
	WD extract (v/v %)						SD extract (v/v %)						AO extract (v/v %)					
	0.5	1	5	10	20	50	0.5	1	5	10	20	50	0.5	1	5	10	20	50
Gram positive bacteria																		
<i>Bacillus subtilis</i> ATCC 3321	0	0	7	10	14	22	0	0	7	11	20	90	0	0	8	16	25	90
<i>Bacillus cereus</i> ATCC 33018	0	0	0	8	16	20	0	0	0	8	17	22	0	0	0	11	22	90
<i>Staphylococcus aureus</i> ATCC 20231	0	0	11	16	22	90	0	0	13	18	23	90	0	8	13	20	24	90
Gram negative bacteria																		
<i>Eschrechia coli</i> ATCC 69337	0	0	8	12	22	90	0	0	8	12	22	90	0	8	12	16	24	90
<i>Pseudomonas aeruginosa</i> ATCC 9027	0	0	0	7	12	18	0	0	0	8	18	22	0	0	0	17	18	24
Yeasts																		
<i>Candida albicans</i> NRRLY 1095	0	0	7	12	16	23	0	0	0	16	18	90	0	8	12	18	22	90
<i>Saccharomyces cerevisiae</i> NRRLY 2043	0	0	0	0	10	16	0	0	0	0	10	18	0	0	0	8	12	22
Molds																		
<i>Aspergillus niger</i> NRRL 326	0	0	9	15	20	24	0	0	0	19	21	60	0	14	18	21	24	90
<i>Aspergillus flavus</i> MERCN 101	0	0	0	14	18	22	0	0	8	14	19	22	0	0	10	14	22	90

Values are the mean inhibition zones from four experiments.
Inhibition zone equal 90 mm means that no microbial growth was detected.