

Table S1. Mycelial growth (mm) of pathogens on PDA medium with various vaporized EOCs

Pathogens	EOCs	Growth with different times (day) ¹						Inhibition rate (%) ¹	
		1	2	3	4	5	6		7
<i>A. flavus</i>	Control	7.17 ± 0.14a	15.17 ± 0.2a	26.42 ± 3.13a	42.67 ± 1.38a	51.58 ± 2.40a	57.58 ± 2.40a	65.67 ± 3.01a	0.00 ± 0.00a
	Geraniol	5.58 ± 0.14c	5.58 ± 0.14e	5.67 ± 0.14e	5.75 ± 0.25e	5.75 ± 0.25f	5.83 ± 0.29f	5.83 ± 0.29e	98.61 ± 0.52e
	Eugenol	6.92 ± 0.14a	14.67 ± 0.29b	23.08 ± 0.76b	28.75 ± 2.38c	33.00 ± 2.61d	35.42 ± 2.70d	38.50 ± 4.77d	44.45±10.56d
	Citral	5.67 ± 0.14c	5.67 ± 0.14e	5.92 ± 0.29e	6.08 ± 0.14e	6.42 ± 0.29ef	6.50 ± 0.10f	7.33 ± 0.80e	96.18 ± 1.16e
	Cinnamaldehyde	7.08 ± 0.14a	14.75 ± 0.25b	23.58 ± 0.76b	39.50 ± 0.25b	47.42 ± 3.33b	53.00 ± 3.68b	58.50 ± 6.14b	11.65 ±11.01b
	Carvone	6.33 ± 0.14b	6.92 ± 0.14d	8.25 ± 0.75d	9.17 ± 0.88d	9.58 ± 0.95e	11.08 ± 0.95e	11.33 ± 1.13e	89.48 ± 2.40e
	Anethole	6.25 ± 0.43b	12.25 ± 0.25c	19.00 ± 0.43c	28.92 ± 1.13c	37.75 ± 1.52c	44.00 ± 1.73c	51.58 ± 0.14c	23.09 ± 3.67c
<i>A. ochraceus</i>	Control	7.93 ± 0.12a	19.77 ± 0.25a	31.00 ± 1.00a	41.67 ± 1.53a	53.17 ± 2.75a	57.67 ± 2.52a	66.83 ±1.26a	0.00 ± 0.00a
	Geraniol	6.00 ± 0.12c	6.00 ± 0.18e	6.00 ± 0.16f	6.00 ± 0.29f	6.00 ± 0.27e	6.00 ± 0.19e	6.00 ± 0.22e	98.38 ± 0.03e
	Eugenol	6.23 ± 0.25bc	6.77 ± 0.25d	9.00 ± 1.32d	9.17 ± 0.76d	10.17 ± 2.47d	11.50 ±2.18de	10.6 ± 2.47de	90.83 ±3.97de
	Citral	6.00 ± 0.32c	6.00 ± 0.24e	6.00 ± 0.22f	6.00 ± 0.05f	6.00 ± 0.14e	6.00 ± 0.16e	6.00 ± 0.21e	98.38 ± 0.03e
	Cinnamaldehyde	6.07 ± 0.12c	6.93 ± 0.12d	7.67 ± 0.58e	8.67 ± 1.04de	10.00 ± 2.29d	13.67 ± 5.13d	15.00 ± 5.57d	83.95 ± 8.72d
	Carvone	6.17 ± 0.29bc	6.17 ± 0.29e	6.33 ± 0.29f	6.83 ± 0.29ef	7.33 ± 0.76de	10.17 ±3.01de	15.17 ± 3.75d	83.60 ± 5.94d
	Anethole	6.07 ± 0.12c	8.33 ± 0.29c	15.00 ± 1.00c	20.17 ± 1.04c	29.17 ± 1.26c	40.83 ± 1.04c	46.17 ± 1.26c	33.42 ± 1.78c
	Cineole	6.47 ± 0.31b	10.67 ± 0.58b	20.00 ± 0.50b	30.5 ± 2.18b	40.33 ± 1.53b	50.33 ± 1.53b	59.17 ± 1.04b	12.35 ± 3.40b

¹The values are expressed as mean \pm SD (n = 3). Data in the same column with different lowercase letters at each time point indicate significantly different at $p < 0.05$ by Duncan's test.

Table S2. Major bioactive components of plant EOs and their relevant antimicrobial effects

Plant EOs	Source and Distrution	Major Bioactive Components	Target Microbes	Concentration	References
<i>Amomum tsao-ko</i> EO	<i>Amomum tsao-ko</i> flower heads	1, 8-cineole (45.24%) rho-propylbenzaldehyde (6.04%)	<i>Trycophyton mentagrophytes</i> , <i>Bacillus subtilis</i> , <i>Staphylococcus aureus</i> , <i>Escherichia coli</i> , and <i>Proteus vulgaris</i>	0.075%	[1]
<i>Amomum kravanh</i> EO	<i>Amomum kravanh</i>	1, 8-cineole (68.42%) α -pinene (5.71%)	<i>Bacillus subtilis</i> and <i>E. coli</i>	0.05%	[2]
<i>Turmeric</i> leaves EO	<i>Turmeric</i> leaves	α -tumerone (35.17%) tumerone (11.93%) β -sesquiphellandrene (11.5%)	<i>A. flavus</i>	1.0%-1.5%	[3]
<i>Zingiber officinale</i> EO	<i>Zingiber officinale</i> roots	α -zingiberene (36.9%) β -sesquiphellandrene (15.3%) β -bisabolene (8.8%)	<i>Fusarium moniliforme</i> , <i>Penicillium</i> spp. and <i>A. niger</i>	0.064%	[4]
<i>Curcuma longa</i> L. and <i>Zingiber officinale</i> Rosc EO	<i>Curcuma longa</i> L. <i>Zingiber officinale</i> Rosc fruits	γ -terpinene (40.92%) p-cymene (27.93%) cumin aldehyde (21.20%)	<i>A. flavus</i> , <i>A. oryzae</i> , <i>A. niger</i> and <i>Alternaria alternata</i>	0.2%	[5]
<i>Foeniculum vulgare</i> L. EO	Fennel leaf	trans-anethole (31-36%) α -pinene (14-20%) limonene (11-13%)	<i>A. flavus</i> and <i>A. paraiticus</i>	0.001%-0.00125%	[6]
Mint EO	Mint aerial parts	isomenthone (0.2-77.5%) pulegone (1.0-50.6%) piperitone (0.3-13.4%)	<i>Staphylococcus aureus</i> , <i>Pseudomonas aeruginosa</i> , <i>E. coli</i> , <i>Saccharomyces cerevisiae</i> , <i>Monascus</i> , <i>Rhizopus</i> , and <i>A. niger</i>	1.49%	[7, 8]
Pepper EO	Pepper fruits	limonene (40.34%) α -phellandrene (24.47%)	Some typical gram-positive bacteria (<i>Staphylococcus aureus</i> , <i>Gambogic section coli</i> and <i>E. coli</i>)	0.75%	[9]

Clove EO	Clove bud	eugenol (71.80%)	<i>Staphylococcus aureus</i> , <i>Bacillus subtilis</i> and <i>A. niger</i>	0.002%-0.013%	[10]
Anise EO	Anise	trans-anethole (88.49%) γ -himachalene (3.13%) cis-isoeugenol (1.99%) linalool (1.79%)	<i>Listeria monocytogenes</i> , <i>E. coli</i> , <i>Staphylococcus aureus</i> , <i>A. section nigri</i> and <i>A. flavus</i>	0.05%	[11]
<i>Lippia rugosa</i> EO	<i>Lippia rugosa</i> leaves	geraniol (51.5%) nerol (18.6%)	<i>A. flavus</i>	0.1%	[12]
<i>Citrus reticulata</i> EO	<i>Citrus reticulata</i> fruits	limonene (46.7%) geranial (19.0%) neral (14.5%) geranyl acetate (3.9%)	<i>A. flavus</i>	0.075%	[13]
Bay laurel EO	Bay laurel leaves	eucalyptol (27.2%) α -terpinenyl acetate (10.2%)	<i>E. coli</i> and <i>A. flavus</i>	2.0%	[14]
Lemongrass EO	<i>Cymbopogon flexuosus</i>	citral (76.00%) neral(28%)	<i>Acinetobacter baumannii</i> , <i>Salmonella</i> <i>enteritidis</i> , <i>E. coli</i> and <i>A. flavus</i>	2.0%	[15]
Tea tree EO	Branches	cis-sabinine hydrate (38.43%)	<i>A. flavus</i> , <i>L. monocytogenes</i> , <i>Salmonella</i> <i>typhimurium</i> and <i>E. coli</i>	0.1%	[16]
Thyme EO	Thyme leaves	carvacrol (81%) p-cymene (4.5%)	<i>Candida albicans</i> and <i>E. coli</i>	0.03%	[17]
Vetiver EO	Vetiver leaves	zizanoic acid (12.87%), khusimol (11.48%)	<i>Staphylococcus aureus</i>	0.008%	[17]
Marigold EO	Marigold leaves	piperitone (50.7%)	<i>A. flavus</i>	0.2%	[18]
Spearmint EO	Spearmint leaves	carvone (51.7%), cis-carveol (24.3%)	<i>A. flavus</i>	0.3%	[19]
<i>Ocimum basilicum</i> EO	Basil	linalool (56.7-60.6%),	<i>A. flavus</i>	0.3%	[20]

Caraway EO	Caraway seeds	epi- α -cadinol (8.6-11.4%) carvone (44.5-95.9%) limonene (1.5-51.3%)	<i>A. flavus</i> , <i>C. albicans</i> and <i>C. dubliniensis</i>	0.2%	[21]
Chamomile EO	Chamomile flower-heads	chamazulene (61.3%) isopropyl hexadecanoate (12.7%) trans-farnesol (6.9%)	<i>L. monocytogenes</i> , <i>Staphylococcus aureus</i> , <i>E. coli</i> and <i>Pseudomonas aeruginosa</i>	0.05%	[6]
Ageratum onyzoides EO	Ageratum conyzoides leaves	ageratocromene (34.69%) caryophyllene (21.2%)	<i>A. flavus</i> , <i>Rhizoctonia solani</i> , <i>Sclerotium rolfsii</i> , <i>Botryodiplodia theobromae</i> , <i>Phomopsis theae</i> and <i>Fusarium</i> spp.	0.3%	[22]
Mandarin EO	Mandarin fruits	limonene (74.4%) cis-oxide limonene (2.8%)	<i>Lactobacillus curvatus</i> , <i>Lactobacillus sakei</i> , <i>Staphylococcus carnosus</i> , <i>Staphylococcus xylosum</i> , <i>Enterobacter gergoviae</i> and <i>Enterobacter amnigenus</i>	0.94%	[23]
Grapefruit EO	Grapefruit peel	limonene (88.6%) α -terpinene (1%)	<i>A. flavus</i> , <i>A. niger</i> , <i>Penicillium chrysogenum</i> and <i>Penicillium verrucosum</i>	0.94%	[24]
Orange EO	Orange fruits	limonene (85.5%)	<i>A. niger</i> , <i>A. flavus</i> , <i>Penicillium chrysogenum</i> and <i>Penicillium verrucosum</i>	0.94%	[24]
<i>Zataria multiflora</i> Boiss EO	<i>Zataria multiflora</i> Boiss	thymol (37.59%) carvacrol (33.65%) para-cymene (7.72%)	<i>Staphylococcus aureus</i> , <i>Bacillus cereus</i> , <i>E. coli</i> , <i>Salmonella typhi</i> , <i>Proteus vulgaris</i> and <i>Shigella flexneri</i>	0.04%	[25]
<i>Piper betle</i> L. EO	<i>Piper betle</i> leaves	eugenol (63.39%) acetyleugenol (14.05%)	<i>A. flavus</i>	0.03-0.73%	[26]
<i>Jamrosa</i> EO	<i>Jamrosa</i> grass	(Z)-citral (59.69%) linalyl acetate (34.99%)	<i>A. flavus</i>	0.04%	[27]
<i>Cinnamomum zeylanicum</i> Blume EO	<i>Lauraceae</i> barks	(E)-cinnamaldehyde (68.95%) benzaldehyde (9.94%)	<i>Staphylococcus aureus</i> , <i>Streptococcus pyogenes</i> , <i>Streptococcus pneumoniae</i> ,	0.04%-1.12%	[28]

(E)-cinnamyl acetate (7.44%) *Enterococcus faecalis*, *Enterococcus faecium*,
Bacillus cereus, *Acinetobacter lwoffii*,
Enterobacter aerogenes, *E. coli*, *Proteus*
mirabilis, *Pseudomonas aeruginosa*,
Salmonella typhimurium, *L. monocytogenes*,
L. ivanovii, *L. welshimeri*, *C. albicans*, *C.*
parapsilosis and *C. krusei*

Table S3. Primers used for qRT-PCR

Species	Gene	Primer sequence (5' to 3')	Amplicon length (bp)
<i>A. flavus</i>	<i>β-tubulin</i>	F: CTCAATCCGACCTGCGAAA R: ACGCCACGCATTTGATCTTC	263
	<i>aflR</i>	F: GATCTGGCTGGTCAGGAGCA R: CGCCTGAAACGGTGGTAGTG	204
	<i>aflS</i>	F: CTCGATGCGGCAGTGTATCT R: ACACCTCCACATGAGCCTTG	109
	<i>aflT</i>	F: GATTCTATTGCCTTGATTTTGG R: GCGTAGTGCCCTGTCTTAT	81
	<i>laeA</i>	F: AAAGGTTGCTCGCTGGTACA R: GACTTCTGACGAAATGCGCC	121
	<i>brlA</i>	F: TCTAGCGGGGATGACCTCAA R: CCGAAGGAAGCCAAAAGTGC	131
	<i>A. ochraceus</i>	<i>GADPH</i>	F: TGCTCAAGTACGACAGCACC R: CTCGGCGAAGAAGTGAACCT
<i>pks</i>		F: TTCTCTGCGCTTCTCACATC R: AACATCATAAGAGGTCAACA	225
<i>p450-B03</i>		F: CTCGGTGACATCAGGGGTATC R: AGCGTATTCAGTCACTCATTGAGA	470
<i>pacC</i>		F: CTCATCGACCCTGCTCTGTC R: GACGCACCTTTTCAACCCAC	121

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