

## Contact toxicity

**Supplementary Table S1.** Efficacy of contact toxicity of CMEO against *T. castaneum* and *C. maculatus* at different exposure times

Test insects	Dose (mg/cm <sup>2</sup> )	Mean mortality per cent of treatments after	
		24 h	48 h
<i>T. castaneum</i>	40	36.7±3.3b	76.7±6.6bc
	60	46.7±8.8b	83.3±3.3ab
	80	50.0±11.5b	70.0±5.7c
	100	80.0±5.7a	83.3±3.3ab
	120	90.0±5.7a	93.3±3.3a
	Control	0±0c	0±0d
	F value	21.54	62.80
	P value	0.00	0.00
<i>C. maculatus</i>	2	6.7±3.3de	16.7±3.3cd
	4	13.3±3.3d	23.3±3.3c
	6	36.7±3.3c	50.0±10.0b
	8	50.0±5.7b	70.0±10.0ab
	10	83.3±3.3a	90.0±5.7a
	Control	0±0e	0±0d
	F value	77.13	24.30
	P value	0.00	0.00

\*Means within the same rows followed by same letter are not significantly different (p<0.05)

## Fumigant toxicity

**Supplementary Table S2.** Efficacy of fumigant toxicity of CMEO against *T. castaneum* and *C. maculatus* at different exposure times

Test insects	Dose (mg/L air)	Mean mortality per cent of treatments after	
		24 h	48 h
<i>T. castaneum</i>	1	3.3±6.7d	6.7±3.3d
	3	20.0±13.3cd	23.3±3.3c
	5	33.3±5.5bc	53.3±6.6b
	7	50.0±6.6b	60.0±0b
	10	86.7±3.3a	93.3±3.3a
	Control	0±0d	0±0d
	F value	32.07	151.31
	P value	0.00	0.00
<i>C. maculatus</i>	1	30.0±0c	53.3±8.8b
	3	43.3±6.6bc	56.7±8.8b
	5	56.7±6.6ab	70.0±5.7b
	7	63.3±3.3ab	73.3±6.6a
	10	76.7±6.6a	96.7±3.3c
	Control	0±0d	0±0d
	F value	40.26	25.70
	P value	0.00	0.00

\*Means within the same rows followed by same letter are not significantly different (p<0.05)