



Research Article

Comparative Bioefficacy of Indigenous Phytoextracts against Subterranean Termites *Odontotermes obesus* Ramb. (Isoptera: Termitidae)

Muhammad Zeeshan Majeed^{1*}, Muhammad Shahzad Akbar¹, Muhammad Afzal¹, Muhammad Mustaqeem², Muhammad Luqman³, Ijaz Asghar⁴ and Muhammad Asam Riaz¹

¹Department of Entomology, College of Agriculture, University of Sargodha, Sargodha, Pakistan

²Department of Chemistry, University of Sargodha, Sub-Campus Bhakkar, Bhakkar, Pakistan

³Department of Agricultural Extension, College of Agriculture, University of Sargodha, Sargodha, Pakistan

⁴Department of English, University of Sargodha, Sargodha, Pakistan

Supplementary Table 1: Analysis of variance comparison of different botanical extracts evaluated under laboratory conditions against worker individuals of subterranean termite (*Odontotermes obesus*).

Source	DF	<i>A. indica</i>			<i>D. viscosa</i>			<i>G. jasminoides</i>			<i>N. indicum</i>			<i>P. hysterophorus</i>		
		MS	F value	P value	MS	F value	P value	MS	F value	P value	MS	F value	P value	MS	F value	P value
Replica-	4	14.2			144.2			139.2			197.5			227.5		
tion																
Concen-	2	4806.7	84.48	<0.001	3326.7	49.73	<0.001	3921.7	51.30	<0.001	3051.7	53.93	<0.001	1745.0	23.06	<0.001
tration																
Time	3	16308.3	286.64	<0.001	3392.8	50.72	<0.001	8819.4	115.38	<0.01	1171.1	197.40	<0.001	4312.8	56.99	<0.001
Conc. x	6	300.0	5.27	<0.001	144.4	2.16	0.0653	579.4	7.58	<0.001	396.1	7.00	<0.01	36.1	0.48	0.8216
Time																
Error	44	56.9			66.9			76.4			56.6			75.7		
Total	59															
CV		16.70			28.37			26.36			19.97			34.12		

P < 0.001 (highly significant) and *P* < 0.01 (significant); two-way factorial ANOVA at $\alpha = 0.05$

Corresponding Author: Muhammad Zeeshan Majeed
zeeshan.majeed@uos.edu.pk

Supplementary Table 2: Analysis of variance comparison of different plant essential oils evaluated under laboratory conditions against worker individuals of subterranean termite (*Odontotermes obesus*).

Source	DF	<i>S. aromaticum</i>			<i>C. citratus</i>			<i>D. alba</i>			<i>A. sativum</i>			<i>C. aurantium</i>		
		MS	F value	P value	MS	F value	P value	MS	F value	P value	MS	F value	P value	MS	F value	P value
Replica- tion	4	47.5			6.7			102.5			210.0			227.5		
Concen- tration	2	7505.0	158.00	<0.001	5471.7	50.86	<0.001	3780.0	58.77	<0.001	3301.7	44.29	<0.001	4385.0	69.65	<0.001
Time	3	13686.1	288.13	<0.001	6312.8	58.68	<0.001	3686.1	57.31	<0.01	6579.4	88.26	<0.001	6731.1	56.99	<0.001
Conc. x Time	6	436.1	9.18	<0.001	529.4	4.92	0.006	171.1	2.66	0.027	539.4	7.24	<0.01	469.4	7.46	<0.001
Error	44	47.5			107.6			64.3			74.6			62.9		
Total		59														
CV		14.82			31.59			27.19			28.62			24.04		

P < 0.001 (highly significant) and *P* < 0.01 (significant); two-way factorial ANOVA at $\alpha = 0.05$