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CERTIFICATE OF ANALYSIS

Customer Name & Address	Nichem Solutions Plot No. A-387, Road No.28, Ramnagar, Wagle Estate, Thane(W)-400604, Maharashtra, India	Report No.	145LAMG5022/R0
		Report Date	24 th February 2021
		Total No. of Pages	4
		Customer Ref No.	145
		Any other Information	Testing of Chip Samples

Sample Details:

Project Name	Efficacy of chips against Termite, <i>Odontotermes</i> under field conditions
Sample Received Date	04 th December 2020
Quantity	3 Packets of chips – each with 10 Nos.
Original Manufactured	-
Batch/Sample No.	No Entry – 013 (2% Chips) / Batch no. NS/021220-01 No Entry – 017 (1% Chips) / Batch no. NS/021220-02 Control chips / Batch no. NS/021220-03
Project Code	145LAMG1464
Experiment Start Date	09 th December 2020
Experiment Completion Date	03 rd February 2021
Description	Colourless chips (Size: Length- 5.5 cm, Breadth – 4.0 cm) (Treatment & Control) Wooden panel (Size: Length- 5.5 cm, Breadth – 4.0 cm) (Negative control)

Methodology

The repellency effect of treated and control chip samples against termites were tested under field conditions. The study was conducted by two different methods:

1. First method was by wrapping the treated and control chips with filter paper applied with 20% sucrose solution, to attract the termites. Chips wrapped with filter paper were placed randomly near the termite mount in the field.
2. Second method was by placing the treated and control chips as it is near termite infested area. Observations for termite infestation on treated and untreated chips were recorded qualitatively at weekly intervals.

One negative control sample (wooden panel with no treatment and no filter paper wrapping) was also tested along with each method, to check the termite infestation along with other samples. The observation was recorded till eighth week.

Table 1 Summary of results for efficacy of chips (wrapping in filter paper applied with 20% sucrose solution) against Termites

Weeks After Treatment/ (09.12.2020)	145LAMG_1_1464 (No Entry-013 (2%Chips))		145LAMG_2_1464 No Entry-017 (1% Chips)		145LAMG_3_1464 Control chips		Negative Control Wooden panel	
	Infestation Observed (Yes/No)	% of Infestation Visually	Infestation Observed (Yes/No)	% of Infestation Visually	Infestation Observed (Yes/No)	% of Infestation Visually	Infestation Observed (Yes/No)	% of Infestation Visually
0 Day Fresh (09.12.2020)	R1	NO	0.0	NO	NO	0.0	NO	0.0
	R2	NO	0.0	NO	NO	0.0	NO	0.0
	R3	NO	0.0	NO	NO	0.0	NO	0.0
1st week (16.12.2020)	R1	NO	0.0	NO	NO	0.0	NO	0.0
	R2	NO	0.0	NO	NO	0.0	NO	0.0
	R3	NO	0.0	NO	NO	0.0	NO	0.0
2nd week (23.12.2020)	R1	NO	0.0	NO	NO	0.0	YES	5.0
	R2	NO	0.0	NO	NO	0.0	YES	5.0
	R3	NO	0.0	NO	NO	0.0	YES	5.0
3rd week (30.12.2020)	R1	NO	0.0	NO	NO	0.0	YES	10.0
	R2	NO	0.0	NO	NO	0.0	YES	10.0
	R3	NO	0.0	NO	NO	0.0	YES	10.0
4th week (06.01.2021)	R1	NO	0.0	NO	NO	0.0	YES	15.0
	R2	NO	0.0	NO	NO	0.0	YES	15.0
	R3	NO	0.0	NO	NO	0.0	YES	10.0
5th week (13.01.2021)	R1	YES	10.0	YES	10.0	15.0	YES	20.0
	R2	YES	10.0	YES	15.0	15.0	YES	25.0
	R3	YES	10.0	YES	10.0	15.0	YES	20.0
6th week (20.01.2021)	R1	YES	15.0	YES	10.0	20.0	YES	25.0
	R2	YES	15.0	YES	15.0	15.0	YES	30.0
	R3	YES	10.0	YES	15.0	20.0	YES	30.0
7th week (27.01.2021)	R1	Yes	15.0	Yes	15.0	25.0	Yes	30.0
	R2	Yes	15.0	Yes	15.0	20.0	Yes	35.0
	R3	Yes	15.0	Yes	20.0	20.0	Yes	30.0
8th week (03.02.2021)	R1	Yes	15.0	Yes	15.0	25.0	Yes	35.0
	R2	Yes	20.0	Yes	20.0	20.0	Yes	35.0
	R3	Yes	20.0	Yes	20.0	25.0	Yes	40.0

No- No infestation; Yes- Infestation found

Note: The infestation that were visually observed after fourth week (on control chips) and fifth week (on No Entry 013/017chips) were found only on the filter paper wrapped on the chips

Table 2 Summary of results for efficacy of chips (without wrapping in paper) against Termites

Weeks After Treatment/ (09.12.2020)	Sample code at ROSS→ Replication↓	145LAMG_1_1464 (No Entry-013 (2%Chips)		145LAMG_2_1464 No Entry-017 (1% Chips)		145LAMG_3_1464 Control chips		Negative Control Wooden panel	
		Infestation Observed (Yes /No)	% of Infestation Visually	Infestation Observed (Yes /No)	% of Infestation Visually	Infestation Observed (Yes /No)	% of Infestation Visually	Infestation Observed (Yes /No)	% of Infestation Visually
0 Day Fresh (09.12.2020)	R1	NO	0.0	NO	0.0	NO	0.0	NO	0.0
	R2	NO	0.0	NO	0.0	NO	0.0	NO	0.0
	R3	NO	0.0	NO	0.0	NO	0.0	NO	0.0
1st week (16.12.2020)	R1	NO	0.0	NO	0.0	NO	0.0	YES	5.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	10.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	5.0
2nd week (23.12.2020)	R1	NO	0.0	NO	0.0	NO	0.0	YES	10.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	15.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	10.0
3rd week (30.12.2020)	R1	NO	0.0	NO	0.0	NO	0.0	YES	15.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	20.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	15.0
4th week (06.01.2021)	R1	NO	0.0	NO	0.0	NO	0.0	YES	20.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	25.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	20.0
5th week (13.01.2021)	R1	NO	0.0	NO	0.0	NO	0.0	YES	30.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	35.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	30.0
6th week (20.01.2021)	R1	NO	0.0	NO	0.0	NO	0.0	YES	35.0
	R2	NO	0.0	NO	0.0	NO	0.0	YES	35.0
	R3	NO	0.0	NO	0.0	NO	0.0	YES	40.0
7th week (27.01.2021)	R1	NO	0.0	NO	0.0	NO	0.0	Yes	40.0
	R2	NO	0.0	NO	0.0	NO	0.0	Yes	35.0
	R3	NO	0.0	NO	0.0	NO	0.0	Yes	40.0
8th week (03.02.2021)	R1	NO	0.0	NO	0.0	NO	0.0	Yes	40.0
	R2	NO	0.0	NO	0.0	NO	0.0	Yes	40.0
	R3	NO	0.0	NO	0.0	NO	0.0	Yes	45.0

The results of the study indicated that there was no termite infestation on any of the chip samples supplied by sponsor. Hence, it is concluded from the study that the chip samples supplied by **M/S. Nichem Solutions** were found to be effective in repelling termites when tested under field conditions.

Photographs



Sushant Suryawanshi
24/02/2024

Sushant Suryawanshi
STUDY DIRECTOR

S. Sathiyamoorthy
Dr. Sathiyamoorthy S 24-02-2024
AUTHORISED SIGNATORY

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