VIKANE

Vikane® Fumigant vs. Orange Oil

FUMIGATION FACTS

Laboratory Study of Orange Oil (XT-2000) Use to Control Drywood Termites in Wood

Orange oil is extracted from orange fruit peels and is available as XT-2000 for treating drywood termites.

The laboratory study used wood boards naturally infested with drywood termites.[1] Prior to treatment, the wood boards were confirmed to be infested with drywood termites by using X-rays and sensors that detect termite feeding and movement, which are methods that do not injure termites. One set of boards was treated with orange oil, a second set was treated with water only and a third set served as an untreated control group. The boards treated with orange oil were injected about 2 inches apart with the maximum amount of orange oil the wood could absorb.

Three months after the treatment, all boards were cut into small fragments to extract and count live and dead drywood termites. Live termites were found in all the boards. Termite survival was high in both control treatments, while an average of 19% of the termites survived the orange oil treatment (see table below).

19% of termites survived treatment with orange oil

Figure 1

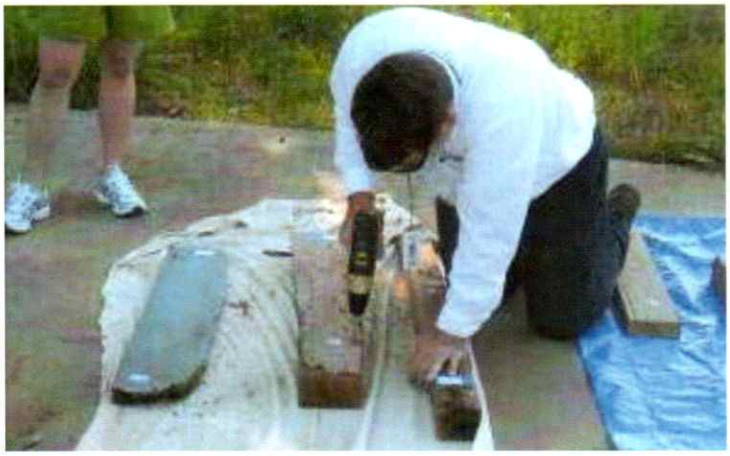
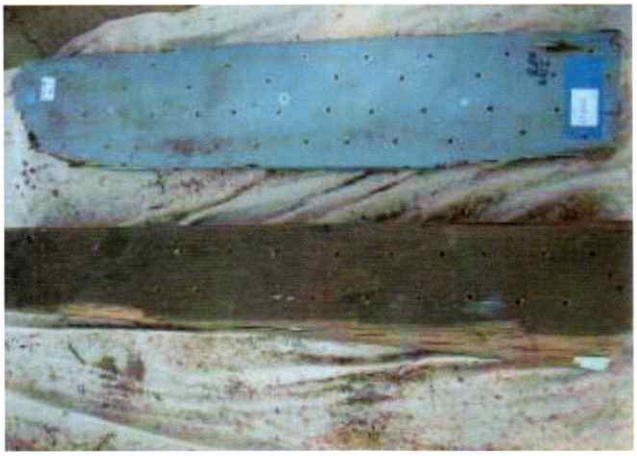


Figure 2



Treatment	Total Number Drywood Termites (Three Boards per Treatment)				Average Survival[b]
	Live	Dead	Casualties[a]	Total	
Orange Oil	336	1,105	9	1,450	18.7%
Water Control	1,090	35	1	1,126	94.2%
Untreated Control	961	38	30	1,029	96.4%

[a]Casualties include termites destroyed in the extraction process, and were not included in the % Survival calculations.
[b]% Survival = Sum of % survival [# Live /(# Live + # Dead)] for each board divided by 3 (number of boards tested)

These results showed that orange oil (XT-2000) eliminated only 81% of drywood termites, even in a best case scenario with complete access to infested wood and thorough application of the maximum amount of orange oil. Whole-home fumigation is the most effective method documented to eliminate drywood termite infestations in structures, including termite colonies in areas like attics, walls and crawlspaces that might be unreachable for localized treatment.[2]

[1]Dr. Vernard Lewis, University of California, Berkeley, CA. 2008
[2]Scheffrahn et al. 1997. J. Econ. Entomol. 90: 492-502; Lewis and Haverty. 1996. J. Econ. Entomol. 89: 922-934.