

US EPA ARCHIVE DOCUMENT

EFFICACY REVIEWDATE: IN 4-30-01 OUT 6-21-01FILE OR REG. NO. 69529-1

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED April 19, 2001DATE OF SUBMISSION April 18, 2001

DATE SUBMISSION ACCEPTED

TYPE PRODUCT(S): (I,) D, H, F, N, R, S

DATA ACCESSION NO(S) . 453568-01;D274488;S596027;Case#046539;AC:301PRODUCT MGR. NO. 03-Layne/QuarlesPRODUCT NAME(S) PestborCOMPANY NAME Quality Borate CompanySUBMISSION PURPOSE Provide performance data in reprint supportingclaims for Argentine ant, pharaoh ant and Tap-inoma melanocephalum for formulated products.CHEMICAL & FORMULATION Disodium octaborate tetrahydrate 98%  
(30 lbs./cu.ft. bulk density manufacturing concentrate)

CONCLUSIONS & RECOMMENDATIONS The data presented in EPA Accession  
(MRID) Number 453568-01, having been obtained from the reprint art-  
icle titled "Laboratory Evaluation of a Boric Acid Liquid Bait on  
Colonies of Tapinoma melanocephalum, Argentine Ants and Pharaoh  
Ants (Hymenoptera: Formicidae)", which meets the requirements of  
§ 11(b)(1)-(7) on p. 268 and the standard of § 95-11(c)(3)(b) on  
pp. 270-1 of the Product Performance Guidelines, are adequate to  
support the registration of the subject product, the sole use  
for this formulation being for the manufacturing of end use  
insecticidal products, more specifically baits. The cited data  
(to be contin'd) is far more than is necessary to establish  
usefulness of this form- ulation for the making of insecticidal  
baits. Results with the 3 species included in the testing were  
as follows: Tapinoma melanocephalum workers were reduced by 97% in  
the first week and brood by 96% in the third week for both colonies  
fed liquid bait continuously and those exposed for 3 days only, while  
queens were eliminated by the 8th week with continuous exposure and  
by the 12th week with 3 days exposure; Argentine ant workers,  
Linepithema humile, and brood were reduced by 90% by the third week

for both colonies fed liquid bait continuously and those exposed for 3 days only, while queens were eliminated by the 7th week with continuous exposure but only reduced in number with 3 days exposure; pharaoh ant, *Monomorium pharaonis*, workers were reduced by 90% and brood by 40% by the third week in colonies exposed continuously, while workers and brood were reduced by 73% and 50%, respectively by the 8th week in colonies exposed for 3 days, and queens were eliminated by the 4th week in colonies exposed continuously but were never eliminated in colonies exposed for only 3 days. At the end of 10 weeks, with the continuous exposure colonies, workers and brood had been reduced 100% and queens eliminated for all 3 ant species.

With 3 days exposure, *T. melanocephalum* workers were reduced by 91%, brood by 99% and queens to 0.3 per colony; Argentine ant workers by 76%, brood by 68% and queens to 1.3 per colony; pharaoh ant workers were reduced by 73%, brood by 50% and queens to 1.0 per colony. These results outperformed the standard hydramethylnon bait with *T. melanocephalum*, and were statistically equal with the other 2 species, with the lone exception of Argentine ant queens which were completely eliminated by continuous bait exposure but only greatly reduced with 3 day exposure and hydramethylnon baits. Therefore, these results collectively support the effectiveness of boric acid liquid baits formulated from the subject manufacturing product in destroying colonies of household ants, particularly if exposure of the bait is continuous. Although only 3 ant species were included in the test, they are representative of numerous ants to be found in and around the home. Furthermore, results with another ant, *Camponotus abdominalis floridanus*, the Florida carpenter ant, are cited in the reprint article. This would indicate the effectiveness of boric acid liquid baits against colonies of household ants in general, confirming earlier results with Bushwhacker as to the nature of the active ingredient involved in both cases.

RL Vern L. McFarland, IB