Proceedings of the Eleventh International Conference on Urban Pests 2025
AF-Borgen, Academic Society, Lund, Sweden
William H Robinson, editor

BEHAVIOR EVALUATION OF MICROENCAPSULATED INSECTICIDE AGAINST *TITYUS SERRULATUS* (SCORPIONES: BUTHIDAE)

[1]F.J. ZORZENON, [2]G. STAGNI, [2]W.L.B. FERREIRA, [2]J.F. WALDVOGEL, [2]A.C. PEREIRA, [1]M.R. POTENZA
[1]Instituto Biológico/APTA, São Paulo, Brazil
[2]Syngenta Professional Solutions LATAM, São Paulo, Brazil

Abstract Scorpions are the main actors responsible for accidents involving venomous animals in Brazil and the arachnid infestation poses an important problem for public health. The species *Tityus serrulatus* is widely distributed in the country, in both urban and rural areas. The trial aimed to evaluate the occurrence of the repellent effect, the level of control and behavior of scorpions exposed to arena partially treated with Demand® 10CS (Lambda-cyhalothrin 10%). For each of the five repetitions, an arena (45x45cm) was set up with 4 pieces of 20x20cm unglazed tiles - two of them were treated with Demand and two weren't treated. They were diagonally disposed inside the arena, with a shelter in their center. The product was sprayed following label recommendation (75mL/10Lwater/200m²). After two hours of the application, 5 scorpions were placed in the central region of the arena, containing 9 smaller pieces of untreated tiles placed in the middle of the arena. The observations were conducted up to 48h after confinement. Mortality was observed after the first hour, reaching 100% of control in 24h. At 24h, 12 scorpions were present in the treated area and 13 were in the not treated area, with no significant difference seen. In the control group, no mortality was observed. The results obtained in this trial showed that every scorpion was exposed to the treated tile in enough time to result mortality. Therefore, there is no evidence that individuals of *Tityus serrulatus* avoided the treated area with Demand® 10CS.

Key words Chemical control, microencapsulated, repellency, scorpions.