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RESIDUAL EFFECTIVENESS EVALUATION OF MICROENCAPSULATED INSECTICIDE AGAINST *TITYUS SERRULATUS* (SCORPIONES: BUTHIDAE) ON DIFFERENT SURFACES

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Abstract The residual effect and performance of an insecticide on different types of surfaces is closely related to its formulation and active ingredient. This study aimed to evaluate the control performance of Demand® 10CS, a microencapsulated formulation with Lambda-cyhalothrin 10%, against field *Tityus serrulatus* up to five months after the application on three types of materials: glazed tiles, clay slate and cement. Every surface of 15x15cm (glazed tiles) and 17x17cm (slate and cement) was treated following label recommendations (rate of 75mL/10Lwater/200m²). Residual effectiveness was evaluated at 30, 60, 90, 120 and 150 days after application. All the evaluations followed the same proceedings: 10 individuals were exposed for 20 minutes, 4 repetitions for each surface. At the 90d evaluation, only 3 repetitions were conducted due to low scorpions availability. The surfaces were stored in a laboratory (room temperature and humidity conditions). After the exposure, the scorpions were placed to an insecticide free space. Mortality was evaluated until 48h after exposition. In the control group, no mortality was observed. Results showed that the product delivered 100% of control during the five months of trial, with 100% mortality occurring in the first four hours after the exposure. Demand® CS formulation provided satisfactory results and long-lasting residual performance in both smooth and porous surfaces.

Key words Chemical control, microencapsulated, residual effectiveness, scorpions.