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EVALUATION OF PHYSICAL AND CHEMICAL HYDROXYCOUMARIN BROMADIOLONE FORMULATED AS PARAFFIN BLOCKS AFTER ENVIRONMENTAL EXPOSURE

[1]SOLANGE PAPINI, [2]VERA LUCIA TEDESCHI SAVOY, [2]RITA DE CÁSSIA BOCCUZZI PRISCO, [2]ELIANE VIEIRA, AND [2]LUIZ CARLOS LUCHINI

[1]Secretaria Municipal de Saúde de São Paulo - Coordenação de Vigilância em Saúde, São Paulo, Brazil
[2]Instituto Biológico, Centro de Pesquisa e Desenvolvimento em Proteção Ambiental, São Paulo, Brazil

Rodent control in São Paulo involves rodenticide applications, including bromadiolone formulated as paraffin block used in culverts to *Rattus norvegicus* control. After application, the blocks are subject to environmental conditions that may change its appearance and bromadiolone concentration. This study evaluated the physical and chemical characteristics of bromadiolone paraffin block after exposure to the environment. In the summer, controlled systems were mounted on the outer area of Instituto Biológico (IB) with blocks connected by wires and placed in culverts on the street. Weekly for 10 weeks, paraffin blocks were collected and then subjected to extraction with 25mL of methanol to 1% HCl under ultrasound in 3 cycles of 10 minutes. The bromadiolona concentration in the extracts analyzed by high performance liquid chromatography efficiency was evaluated as percentage of initial concentration of bromadiolone. After 10 weeks were recovered only 53% of the blocks of the culvert and it was observed that in some systems of the IB some blocks lost the wires after 3 weeks of the exposition, probably due to high temperature. The extraction of the blocks IB systems revealed a decrease of about 50% in the percentage of recovery of bromadiolone in the 10 weeks of exposure, but the extraction of the blocks placed in culverts had 100% recovery, possibly due to protective effect of organic and inorganic waste present in the drains. The results indicated good chemical stability of the bromadiolone exposed to the environmental for 10 weeks.

Key Words Rodenticide, stability, active ingredient

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