

Comparative Evaluations on the Rapid Knockdown and Lethal Effects Among Three Different Commercial Aerosols Against Various Strains of German Cockroaches

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The knockdown and lethal efficacies of three Korean commercial aerosols including Combat Speed[®], Home Keeper[®] and Raid Power[®] against five strains of the German cockroach, *Blattella germanica* (L.) were assessed. The active ingredients (AIs) of Combat Speed[®] are 0.1% imiprothrin and 0.3% cyphenothrin [(1R)-trans-isomers]. The AIs of Home Keeper[®] are 0.2% tetramethrin and 0.3% permethrin. The AIs of Raid Power[®] are 1.0% pyrethrin and 0.2% permethrin. The efficacies were performed using a 0.3 gram spray tower test on 3 replications of 10 male German cockroaches in each chemical aerosol. The seconds to 50% (KT50) and 90% (KT90) knockdown times, and 50% (LT50) and 90% (LT90) lethal times were recorded. The results show that Combat Speed[®] was more KT50 than 3.1 and 2.3 times faster acting than Home Keeper[®] and Raid Power[®], respectively. Combat Speed[®] was more KT90 than 3.8 times faster acting than Home Keeper[®]. On the other hand, Combat Speed[®] was more LT50 than 3.8 and 1.8 times faster acting than Home Keeper[®] and Raid Power[®], respectively. Combat Speed[®] was more LT90 than 10.3 and 2.1 times faster acting than Home Keeper[®] and Raid Power[®], respectively. As a result of this study, Combat Speed[®] was considered the insecticide aerosol with faster action than Home Keeper[®] and Raid Power[®] against various strains of German cockroaches in Korea.