



MR-08 (menthol propyleneglycol carbonate) is a nontoxic GRAS alternative to pyrethroids for indoor, area-wide and personal protection against insects.

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Abstract

Menthol propyleneglycol carbonate (MR-08) is a GRAS (generally recognized as safe) compound in current use as a food additive. Besides its use as a cooling agent, MR-08 is a multi-functional chemical with a range of effects, including as an anti-inflammatory and a repellent against insects. MR-08 is equivalent to DEET in repelling mosquitoes. Formulations containing MR-08 have shown efficacy against houseflies, horse flies, ants, head lice, hornets and many other insect species without any toxic effects. It is far superior to DEET when used against sand flies and will repel termites for at least 1 year when impregnated into wood. MR-08, incorporated into a vaporizing liquid, is equivalent to prallethrin in preventing mosquito bites inside rooms and enclosed areas. Because MR-08 is a food additive, it can have many applications where food contact may be involved. These include prevention of insect infestations in food containers, grain silo, food preparation areas and general personal protection.