

## **PLANT BASED MOSQUITO REPELLENTS – A SOLUTION FOR PEOPLE AVOIDING CHEMICAL REPELLENTS?**

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**Abstract** There are several regions in Poland where mosquitoes emerge in huge numbers almost every year. Some of them are areas of protected nature - mainly wetlands, where the insects cannot be controlled in mass actions. Many inhabitants or tourists visiting these regions try to cope with the problem on their own - the solution is the use of repellents for personal protection. People more willingly use agents advertised as “based on naturally occurring plant oils” than biocides containing synthetic chemicals, especially for protection of children. The aim of the study was to evaluate efficiency of several products (biocides and cosmetic products) present on the Polish market containing plant oils, declared as giving protection against mosquitoes. The evaluated formulations were: tissues, bracelets, patches and sprays. The products were tested against adult *Aedes aegypti* female mosquitoes on human volunteers under laboratory conditions. Our results did show, that small cosmetic products, such as tissues and patches reduced mosquito bites up to 48% after 1 hour. Bracelets gave significant protection after warming up from the body: after the 1<sup>st</sup> hour 70% reduction was observed and up to 85% after 4 hours, respectively. Tested sprays based on plant oils protected against mosquito bites as well as biocidal products with 15% DEET.