

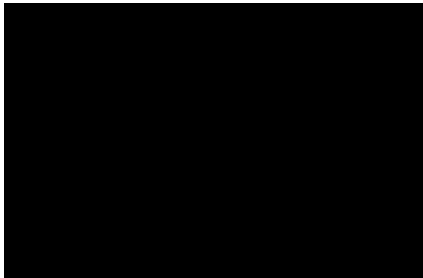
**SIMULATED-USE TRIAL OF A PERSONAL SKIN REPELLENT  
AGAINST MOSQUITOES**

Trial against *Aedes albopictus*

**RELMI014 - AFTERSUN CON CITRONELA ORGÁNICA**

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**SIMULATED-USE TRIAL OF A PERSONAL SKIN REPELLENT  
AGAINST MOSQUITOES**  
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## 1. PURPOSE

The purpose of the study was to measure the duration of efficacy of a product towards one mosquito species.

The trial was an "arm in cage test" and was carried out on human volunteers, against mosquitoes *Aedes albopictus*.

## 2. DEFINITIONS

**Efficacy duration:** it is defined as the time between the application of the repellent and the last assessment time without bites. The trial was stopped when one bite was observed and confirmed by a second one in succession.

## 3. EXPERIMENTAL DESIGN

The study was conducted in the laboratory on 3 persons and 1 species, in operating conditions previously defined according to the standard method:

Guidelines for efficacy testing of mosquito repellents for human skin (WHO/HTM/NTD/WHOPES/2009.4), World Health Organization, 2009,

### 3.1. Human volunteers

The study was conducted on 3 subjects, 2 women and one men. The test area was the forearm from wrist to elbow, i.e. an average area of 600 cm<sup>2</sup>

They were all informed about the purpose of the study and the corresponding risks (bites) and they all consented to this in a complete knowledge and understanding of the trial.

The volunteers did not apply on their forearms perfumes or repellents in the 12 hours before the test. They were non-smoking and have not smoked for a period of 12 hours before the start of the study and throughout the duration of the test.

### 3.2. Species

The study was conducted on the following species, females only because they bite:  
*Aedes albopictus*

Female used were between 5 and 7 days old.

## 6. RESULTS

The raw data are presented in Appendix.

Testing on the untreated control has proved the natural will of the females to sting.

*Table 1 : Efficacy duration without bite*

Species	Mean time ater application when at least 2 bites were observed	Protection duration
<i>Aedes albopictus</i>	3.3 hours	<b>3 hours</b>



## 7. CONCLUSION

Under the conditions of this test, the samples provided, the strains of insects and the method used, the product

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applied at a rate of 1 g / 600 cm<sup>2</sup> (average area of a forearm), i.e. 1.67 mg/cm<sup>2</sup>, has proved a complete protection over a time of:

3 hours against mosquitoes *Aedes albopictus*.

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