

TOXICITY OF CITRUS OILS AGAINST *CALLOSOBRUCHUS MACULATUS* (F.) ADULTS

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Insecticidal activity of many plants against several insect pests has been documented. In the present study, the effects of volatile components of *Citrus paradisi*, *C. aurantium*, *C. limonium*, and *C. sinensis* peel essential oils were investigated on the cowpea adult bruchid, *Callosobruchus maculatus* (F.). The oils were extracted from the fruit peel using hydrodistillation. The results indicated that the *citrus* oils had high fumigant activity against adult beetles. The mortality of 1-2 day-old adults increased with concentration and exposure time from 3 to 24 h. The oil of *C. paradisi* was more effective than those of *C. aurantium* and *C. limonium* (The LC₅₀s were 127.9, 147.6 and 237.6 µl/l at 24h, respectively). The oil of *C. sinensis* proved to be least toxic (LC₅₀ =262.4 µl/l). The results suggested that citrus peel oils can be used as potential control measure against cowpea beetles.



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*WPRS International Organisation for Biological and Integrated Control of Noxious
Animals and Plants: West Palaearctic Regional Section*

*SROP Organisation Internationale de Lutte Biologique et Intégrée contre les Animaux et les
Plantes Nuisibles: Section Régionale Ouest Paléarctique*

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Dear Dr. Gholamhossein Moravej,

It is my pleasure to extend you an invitation to make a presentation on "Toxicity of citrus oils against *Callosobruchus maculatus* (F.) adults " in the conference of IOBC / WPRS Integrated Protection of Stored Products to be held in Poznan, Poland, August 20-23, 2007.

As the organizers of the conference, we find it extremely important for the participants of the conference to learn pest problems and control using new techniques. Your contribution to the advancement of science with such presentation will be very much appreciated.

Please use this document to make all necessary administrative and travel arrangements to attend the conference.

I hope you accept this invitation. I look forward to hearing from you at your earliest convenience.

Yours sincerely,

D. Sosnowska

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