Abstract

Losses Post-harvest of cereals and pulses are a major problem in Algeria. Insect pests of stored commodities, mostly Coleoptera can cause the total loss of a stock.

The most common way to limit their activities is the use of pesticides whose side effects are unfortunately very numerous. In the last two decades, many works were carried for the purpose research for more selective, more specific methods of protecting stored products that respect human health and the environment. The use of chemicals of botanical origin for their repellent effects, fumigant and antifeedantpropertiesas the best alternative of clean fight against these pests.

Our work is part of this theme and aims to evaluate éfficacityof the powder and essential oils of *Lavandula angustifolia*medicinal plant against adults of *Rhyzopertha dominica*, beetle pest of stored products.

Several aspects have been evaluated:

-Phytochemical screening of the plant: the following compounds: flavonoid flavonoids, tannins, leucoanthocyanans, saponins, terpenoids and steroids are detected

- Physicochemical properties of essential oils : isolated with hydro-distillation method by Clevenger apparatus, the results showed that the parameters tested are in agreement with those mentioned by the standards.

Toxicologicalessay:by topical application of essential oilsand with the powder of the plant have allowed to identify LC25 and LC50.against adultsof *Rhyzopertha dominica* after 24,48 and72h after treatment. Resultsshowed that as the concentration and exposure time increased, the mortality also increased.

- Effect of essential oils on the amount of food ingested and growth of insect's individuals: the results obtained showed decrease of weight and the amount food intake against the targeted insects

Key words:*Rhyzopertha dominica*,*Lavandula angustifolia*, , ,antifeedant activity, Phytochemical screening