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Assessing the impact of storage temperature on the stability and biocidal activity of essential oils formulated. Case *Tribolium castaneum* (Herbst). (*Insecta, Tenebrionidae*)

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Cereals like other stored food are currently experiencing serious health problems during storage. The offending agents are primary pests such as *Sitophilus oryzae* and secondary pests among other (*Tribolium.Sp*). This study focused on the evaluation of the biocidal effect of the essential oils of thyme and made the citrus, against adults of red flour beetle (*Tribolium castaneum*) under different temperature regimes. The results of this study showed that different molecules have made a late effect (12h-14h-16h-18h) on the populations of *Tribolium castaneum* at the storage temperature of 20°C. The same results show an early striking effect of thymol and carvacrol on individuals *Tribolium castaneum* compared to limonene. The toxicity of thymol and carvacrol are much more active than limonene at 12h and exercises a very remarkable as limonene expresses its toxicity that from 14h deadly effect. Temperatures under 20°C and 25°C, thymol showed a greater degree of efficiency followed by carvacrol and limonene which has a low. However at 28°C, carvacrol expresses a very significant biocidal effect compared to the other two formulations thymol and limonene.

Keywords: *Thymus fontanesii*, bio-efficacy, formulation, temperature, *Tribolium castaneum*

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