

Effects of Carbon Dioxide on the Sensory of Pumpkin seed and Its Toxicity Against *Oryzaephilus mercator*

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Abstract : Carbon dioxide treatment is one of the new methods for storage pest control. It can be used to replace chemical approaches. In the present study, the mortalities of *Oryzaephilus mercator* as the key pest of stored products, especially nuts, were studied after being exposed to different CO₂ pressures (0.1, 0.2, 0.3, 0.4 and 0.5 bar) within 24 hours. The mortality percentages of *O. mercator* increased with an increase in CO₂ pressure. The results obtained from experiments on the qualitative characteristics of the studied dates through the sensory test revealed that CO₂ pressures did not affect their aroma, color, crispness, firmness, and overall acceptance. Therefore, it could be concluded that the atmospheric CO₂ gas provided a cost-effective and environmentally friendly method for controlling the insect pests of pumpkin seed, besides preserving their sensory and quality properties.

Keywords : carbon dioxide, control, seed, qualitative characteristics

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