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.

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