

Title Effect of packaging and storage temperature on postharvest behavior in fresh faba beans (*Vicia faba* L.)

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Keyword Faba beans; packaging; storage temperature

Abstract

Faba beans are one of the most consumed legumes in the world. They are highly valued for its nutritional quality, specially protein content. The objective of this research was to evaluated the postharvest behavior of fresh faba beans in two types of packaging and two storage temperature. Pods were harvested and faba seeds were packed (60 g per box) using: a- high density polyethylene (HDPE) boxes with lids and b- covered boxes with resinite film. Seeds were stored in refrigerated chambers at 1°C and 4°C during two weeks. Weight loss, seed coat color (Minolta CR 300), oxygen and carbon dioxide percentage (Dansensor) inside the boxes, overall visual quality, firmness and sugar content were measured during the storage period. A randomized design was used and mean comparisons were made by Tukey's test. Overall visual quality was analyzed by a non parametric test. Weight loss, carbon dioxide percentage and firmness were affected by type of packaging. Overall visual quality of seeds decreased along the storage period at both temperatures. Significant differences were found in some color parameters (L*, b*, C, hue). At 4°C, a higher decrease in oxygen and increase in carbon dioxide were measured inside the boxes.