EFFECT OF PACKAGING AND CONSERVATION CONDITIONS ON SOME PHYSICAL-CHEMICAL PROPERTIES OF ALMONDS

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Abstract

Food quality is a concept that has attracted the attention of Industries and consumers, hence the concern to preserve the products under appropriate conditions, avoiding physical and chemical changes that jeopardize the integrity of the food. In this context, assessments were made of the physical and chemical properties in order to investigate the effects of storage in almonds, under certain conditions of temperature, relative humidity and packaging.

The almonds used were from different origins, namely Spain, Portugal and United States and the conservation processes tested were: storage at room temperature, in a stove at 30 and 50 ^{0}C without control over relative humidity, in a chamber at 30 and 50 ^{0}C with relative humidity of 90%; refrigeration and freezing. The packages used were two types of plastic: linear low density polyethylene (LLDPE) and low density polyethylene (LDPE). The properties evaluated were moisture content, water activity, color and texture.

The principal results show that the storage conditions that best preserve the characteristics of almonds are those at low temperatures, because, while the treatments at high temperatures induced in general more changes, the refrigeration and freezing systems had a lower effect on the products characteristics, particularly moisture, water activity, hardness and friability.

From the results obtained it was concluded that for a good preservation of almonds during storage should be used a packaging material, preferably LDPE, and that with respect to storage conditions the best methods are at room temperature or, alternatively, in refrigeration or freezing.

Key words: *Almond, Color, Texture, Water Activity.*