Packaging of dates in modified atmosphere conditions

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Date is one of the most important agriculture products in Iran but the main part of date yield is still packaged without considering sanitation. For this reason, agreat part of its product is spoiled . In modified atmosphere packaging methods , date is packed in a film which has the required permeability to moisture, oxygen , nitrogen and carbon dioxide.

Air is removed from the pack and replaced with a controlled mixture of gases, and the package is heat sealed.

Horizontal form fill-seal equipment allows space around food for the gas.

The normal composition of air is 75% nitrogen and 21% oxygen , with the balance made up of carbon dioxide and other gases. By artificial increasing the proporation of carbon dioxide and/or reducing the proportion of oxygen , the rate of respiration of fresh foods is reduced and shelf life is extended. however, close control of the degree of modification is necessary to prevent physiological disorders in the living tissues and secondary spoilage by anaerobic micro-organisms. Carbon dioxide has anti-microbial properties but the mechanisms is not still fully understood. The effect is likely to be due to the toxicity of carbon dioxide but, as it is an find product of respiratory pathway, it is unlikely to have direct effect on the rate of respiration of foods.