

## Modified Atmosphere packaging of apple for exportation

B.Tajoddin<sup>1</sup> and Z.Hamideh Isfahani<sup>2</sup>

1. Technical and Agricultural Engineering Research Institute, Karaj.

2. College of Agriculture, Tarbiat Modarres University , Tehran.

Food protection has always captured the mans mind .In a way that, through the years he has used different ways and methods in protecting his needs such as preservation of agricultural products by cold storage, controlled Atmosphere storage and modified atmosphere packaging (MAP). MAP means protection of food in the atmosphere which is including gases such as  $CO^2$ ,  $N^2$  and  $O^2$ .

Different from air, in this method, MAP provides foods that are fresh. It extends the storage life by protecting foods from spoilage, and makes easy distribution of foods for retails and consumers.

More than 35% agricultural products are spoiled annually after harvesting and one of the important factors for this wastes is the lack of packaging . In this research , apples (cv. Golab) are packed with form-fill-seals packaging machine. After being washed and dried about 500 gr of apple sat on the PVC from and three different composition of  $O^2$  and  $Co^2$  gases injuced inside package.

After wards the packages were sealed and protected in two different refrigerators with  $0^{\circ}C$  and  $4^{\circ}C$  temperatures. The chemical, microbial and organoleptic analysis will be done every ten days, and continued for 8 time. After the analysis is finished , the results will be evaluated in factorial experimental design.