S U M M A R Y

This study was carried out mainly to formulate some jellies for diabetics and to follow the changes in their quality and composition during processing and storage.

In this investigation the acceptability and quality of dietetic fruit jellies prepared with the use of several sweeteners (fructose, aspartame, acesulfame-K and their mixtures which do not require insulin for their metabolism, different kinds of juices ("Balady" orange, citrus blend, and strawberry juices) and thickening agents (pectin & gelatin) were evaluated.

The results obtained are as follows:

1. The chemical and physical properties of strawberry, "Balady" orange and citrus blend juices were determined.
2. The chemical analysis of different kinds of jellies after processing and during storage for six months at 5°C±1 were carried out:
   a. Total soluble solids in jellies sweetened with sucrose were higher than that sweetened with fructose whereas jellies sweeted with micture of fructose and aspartame (APM) or acessulfame-K, APM or APM and acesulfame-K mixture were lower in total soluble solids.
   b. The percentage of reducing sugars for treatment sweetened with fructose was higher than that sweetened with APM or acesulfame-K and increased during storage.
   c. The total acidity for all jellies treatments were nearly similar but during storage it increased in jellies with pectin more than in jellies with gelatin.

d. Carotenoids and anthocyanins in all jellies were not affected significantly by processing by processing, while decreased during storage.

e. The decrease percentage of transmission for all treatments increase during storage.

3. High performance liquid chromatography were used determine the APM and its decrease during storage period.

4. Organoliptic evaluation was used to test the consumer preference in respect to the effect of different processing techniques and storage period on quality attributes of all jellies treatments. Significant test was carried out to obtain least significant degree (L.S.D.) between treatments.

5. The (CFU/g) for mold and yeast less than 10 for all jellies treatments during storage whereas the (CFU/g) for total bacteria count less than 30 for all jellies treatments after storage period.

6. The diet prepared jellies were varied for its calories, sucrose treatments has the high K/cal. per gram whereas APM or mixture of APM and acesulfame-K has the lowest K/cal per gram.