Thermostabilized Shelf Life Study
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ABSTRACT

- The objective of this project is to determine the shelf life and quality of various foods items by means of an accelerated shelf life test.
- The primary goal of the Advanced Food Technology Project in these long duration exploratory research to provide the crew with a palatable, nutritious and safe food system while minimizing volume, mass, and waste.

RESULTS AND DISCUSSION

Fruits (Apricot Cobbler)
- Aroma is constituted by the presence of volatiles and by sweetness, acidity and the antiangiogenesis contributed by the phenolics.
- Vitamin C demonstrated a clear linear decline with time and temperature. At baseline, the content was 179 mg/100g. After 36 months storage at 72°F, the content was 4.87 mg/100g.
- Shelf life projected to be 65 months at 72°F.

Vegetables (Carrot Coins)
- Gravimetric decreases in all related color values for all temperatures over the storage period, yellow in particular.
- Overall acceptance of carrot coins declined gradually over the storage period with the comments as “too mushy”.
- Shelf life projected to be 48 months at 72°F.

Eggs (Broccoli Soufflé, Vegetable Omelet)
- It is difficult to produce a thermostabilized egg product due to sugar-amino reaction produces dark pigments, decreasing the nutritive value of the proteins and resulting in a decrease of flavor.
- Both products were unacceptable shortly after production indicating a shelf life of 6 months.
- Testing was conducted to analytical data to try to better understand where the deterioration happens.

REFERENCES