



Packing and Refrigeration for Mangaba Preservation

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INTRODUCTION

Mangaba (*Hancornia speciosa* Gomes - Apocynaceae) is a native Brazilian fruit that the production is predominantly extractive. Nevertheless, due to the human exploration of coast areas in Brazil, this species is endangered. The species has high social, economic and cultural importance in areas where it occurs. The work was to evaluate the use of packaging in cold storage of mangaba (10°C).

MATERIAL AND METHODS

Harvest Area: Itaporanga d'Ajuda, Sergipe, Brazil.

Analysis: Embrapa Coastal Tablelands, Aracaju, Sergipe, Brazil.

Storage conditions: 10°C.



Avaliations: each two days, about:

a) **Water activity:** aqualab

b) **Soluble Solids (SS):** °Brix

c) **Titrateable Acidity (TA):** NaOH 0,1N and phenolphthalein 1% as an indicator. The result were expressed in % citric acid.

d) **C Vitamin content:** DCBIB (Diclorofenolendofenol) and the results were expressed in mg x 100⁻¹

e) **pH:** 5g:50 mL water.

f) **SS/TA ratio**



Experimental Design: completely randomized in a factorial 3 x 5 (three packing systems: control (unpacked); polyester trays wrapped in PVC film and polyethylene terephthalate trays (PET) for five storage periods - 0,2,4,6 and 8 days), with four replications. The data were statistically analyzed by the SAS® System program, which were submitted to ANOVA and Tukey 5% test.



RESULTS

Table 1. Characteristics of mangaba stored at 10°C in different packages. SS: soluble solids content; WA: water activity; TA: Titratable acidity; C Vit.: vitamin C content.

	SS	WA	TA	C Vit.	pH	SS/TA
S/E	13,34	0,989	4,23b	162,83	3,48	3,33a
PVC	13,73	0,989	4,77ab	187,50	3,46	3,04a
PET	13,69	0,987	5,24a	189,14	3,50	2,73b
P	0,6205	0,2095	0,0045	0,0726	0,8537	0,0039
Cv%	10,08	0,42	17,01	19,51	7,05	15,77

* Means in the same column are significantly different (P <0.05) by T test (pdiff)



Tabela 2. Postharvest changes in mangaba during refrigerated store (10°C) for eight days .

	SS	WA	TA	C Vit.	pH	SS/TA
0	12,00b	0,991a	4,64c	135,20c	3,19c	2,57d
2	10,30c	0,989ab	4,52ab	133,77c	3,42b	2,32c
4	15,36a	0,990ab	4,23b	114,03c	3,64a	3,71a
6	15,01a	0,985c	5,15a	203,95b	3,55ab	2,96b
8	15,27a	0,987bc	5,09a	267,54a	3,60ab	3,13b
P	0,0001	0,0158	0,0210	0,0001	0,0005	<0,0001
Cv%	10,08	0,42	17,01	19,51	7,05	15,77

*Means in the same column are significantly different (P <0.05) by T test (pdiff)

CONCLUSION

The PET packaging resulted in more acidic fruits (5.24) and less SS/TA ratio (2.73). The other characteristics were not influenced by the packaging.