

# EFFECT OF TREATMENTS WITH AID AGENTS ON THE POSTHARVEST QUALITY OF MINIMALLY PROCESSED PEACHES CV. 'BRS KAMPAI'

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## 1. INTRODUCTION

The rapid postharvest deterioration of peaches is a marketing problem, especially when the fruit is minimally processed.

Minimally processed products are defined as any fruit or vegetable, or any combination which has been physically altered from its original form, while maintaining its natural state. Regardless of type, it is selected, washed, peeled and cut, resulting in 100% usable product that is later packaged or pre-packaged.

The objective of this study was to evaluate the effect of treatments with aid agents on the shelf life of minimally processed peach es cv. 'Kampai'.

## 2. MATERIAL AND METHODS

Aiming to minimize this problem peaches of 'BRS Kampai' cultivar (Embrapa Clima Temperado) were stored in cold room at 1 °C for 10 days and after minimally processed in slices and treated by immersion in: control (distilled water) (T1), L-cysteine 0.5% (T2), L-ascorbic acid 0.5% (T3), L-cysteine at 0.5% plus calcium chloride 1% (T4) and L-ascorbic acid 0.5% plus calcium chloride 1% (T5). Following the treatments fruits were packed and stored in cold room at 4 °C for 0, 3 and 6 days simulating a marketing period. After each period, physical and chemical analysis were performed : color (L \*, a\*, b \*), flesh firmness (FF), total soluble solids (TSS), pH and titratable acidity (TA). After analysis of variance, means were compared by the Least Significant Difference (LSD) test (P < 0.05).

## 3. RESULTS AND DISCUSSION

The L\* value was significantly different among treatments, and T2 (71.99), T4 (69.52) and T5 (69.50) resulted in higher values, providing samples of light color (best appearance).

TSS (° Brix) content was higher in T1 (12.79), T2 (12.36), T3 (12.78) and T4 (12.79) and lowest in T5 (11.67). FF was lower at 6 days (23.14 N). TA (% citric acid) was higher immediately after processing (0,43) and 3 days (0,41) than 6 days (0.36).

**Table 1.** Values of L\* and Total Soluble Solids in minimally processed peaches cv. 'BRS Kampai' after the treatments with aid agents and 10 days of cold storage at 1 °C.

Dependent Variable	T1	T2	T3	T4	T5
L*	65.86 B	71.99 A	65.08 B	69.52 A	69.50 A
TSS (° Brix)	12.79 A	12.36 A	12.78 A	12.79 A	11.67 B

Means followed by the same letter in line do not differ statistically (P<0,05) by the test LSD. (T1) control (distilled water), (T2) L-cysteine 0.5%, (T3) L-ascorbic acid 0.5%, (T4) L-cysteine at 0.5% plus calcium chloride 1% and (T5) L-ascorbic acid 0.5% plus calcium chloride 1%.

**Table 2.** Values of Flesh Firmness and Titratable Acidity in minimally processed peaches cv. 'BRS Kampai' after three periods of simulating marketing in cold room at 4°C.

Dependent Variable	Storage period		
	0 days	3 days	6 days
FF(Newton)	31.64 A	28.26 A	23.14 B
TA (% citric acid)	0.43 A	0.41 A	0.36 B

Means followed by the same letter in line do not differ statistically (P<0,05) by the test LSD.

## 4. CONCLUSION

It was concluded that the treatments with aid agents (L-cysteine 0.5% + calcium chloride 1% and L-ascorbic acid 0.5% alone or plus calcium chloride 1%) preserve the quality of minimally processed peaches for at least 6 days.