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Convective dehydration processing of peach

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Dehydration of peach is an alternative to enhance storage stability, minimize packaging requirement and reducing post-harvest cost without a sensorial and nutritional quality loss. Preservation of fruits through sun drying techniques is practiced in Cova da Beira (a Portuguese region that has a protected geographical indication for peach), as a homemade process without quality and safety control.

The aim of this work was to prepare quality dehydrated products based on a convective drying process with low cost. This process has short drying time and controlled temperature that causes minimal damage to the product without added preservatives or sugar.

The samples of 'Baby Gold' cultivar (*Prunus persica*) obtained from local producer were peeled, laminated and immediately dehydrated. Samples were stored in sealed plastic containers at 25°C for subsequent analysis. In the drying process were controlled forced convection air velocity of 1.25 to 1.50 m/s, air temperature between 45 and 75°C and drying time between 7 to 11 hours. During dehydration process temperature and fruit moisture were controlled. pH, acidity, soluble solids content (SSC) and mesophilic aerobic count were performed in fresh and dehydrated fruit.

Dehydrated peach were similar to homemade products. Moisture was below 12%, without significant variation of SSC and acidity (on a dry basis). No deleterious effect occurred on peach mesophilic aerobic count, since a slight decrease was registered between fresh and dehydrated fruit.

Convective Dehydration Processing of Peach



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Introduction

Preservation of fruits through sun drying techniques is practiced in Cova da Beira, as a homemade process without quality and safety control.

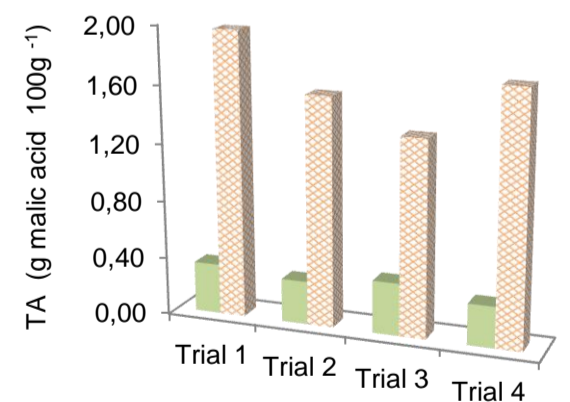
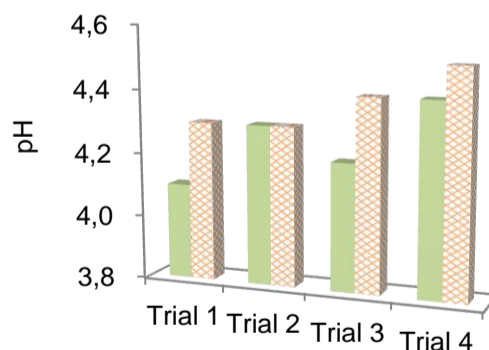
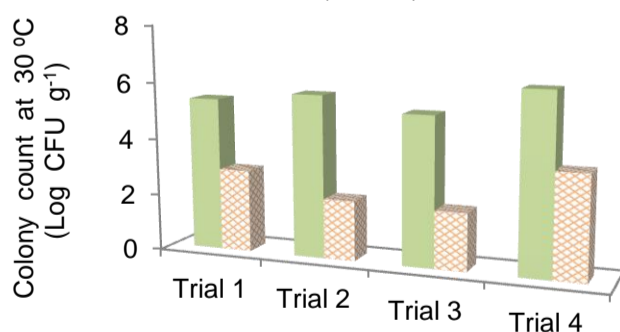
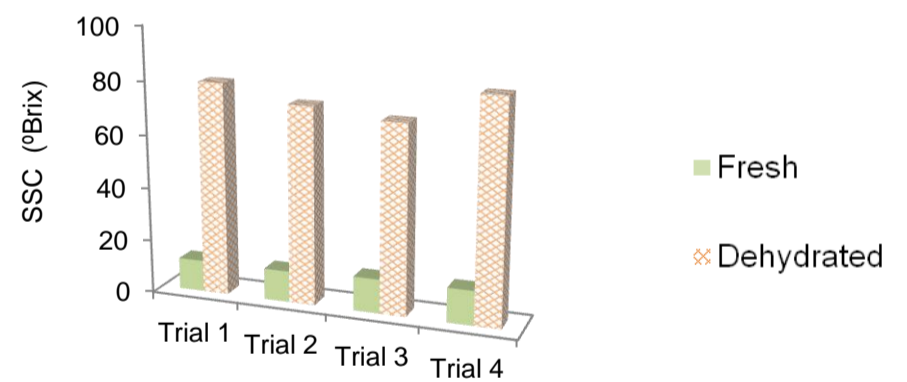
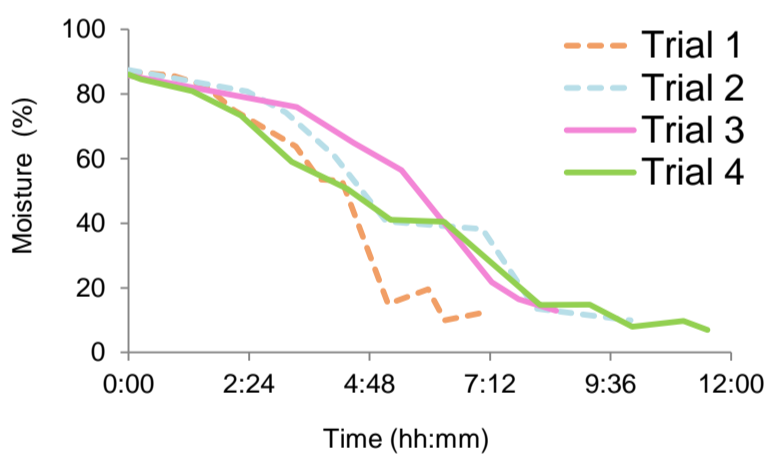
The aim of this work was to prepare quality dehydrated products based on a convective drying process with low cost.

Material and Methods

- 'Baby Gold' peaches (*Prunus persica*) – orchard in Cova da Beira region, that has a Protected Geographical Indication
- Drying process conditions: forced convection air velocity of 1.25 to 1.50 m s⁻¹, air temperature between 45 and 75°C and drying time between 7 to 11 hours
- Fruit moisture was monitored during the process
- pH, titratable acidity (TA), soluble solids content (SSC) and colony count at 30°C were analyzed



Results



Conclusions

Dehydrated peach was similar to homemade products.

Final moisture was below 12% in the 4 trials, without significant differences of SSC and TA.

No deleterious effect occurred on peach colony count, since a slight decrease was registered between fresh and dehydrated fruit.

Acknowledgments

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