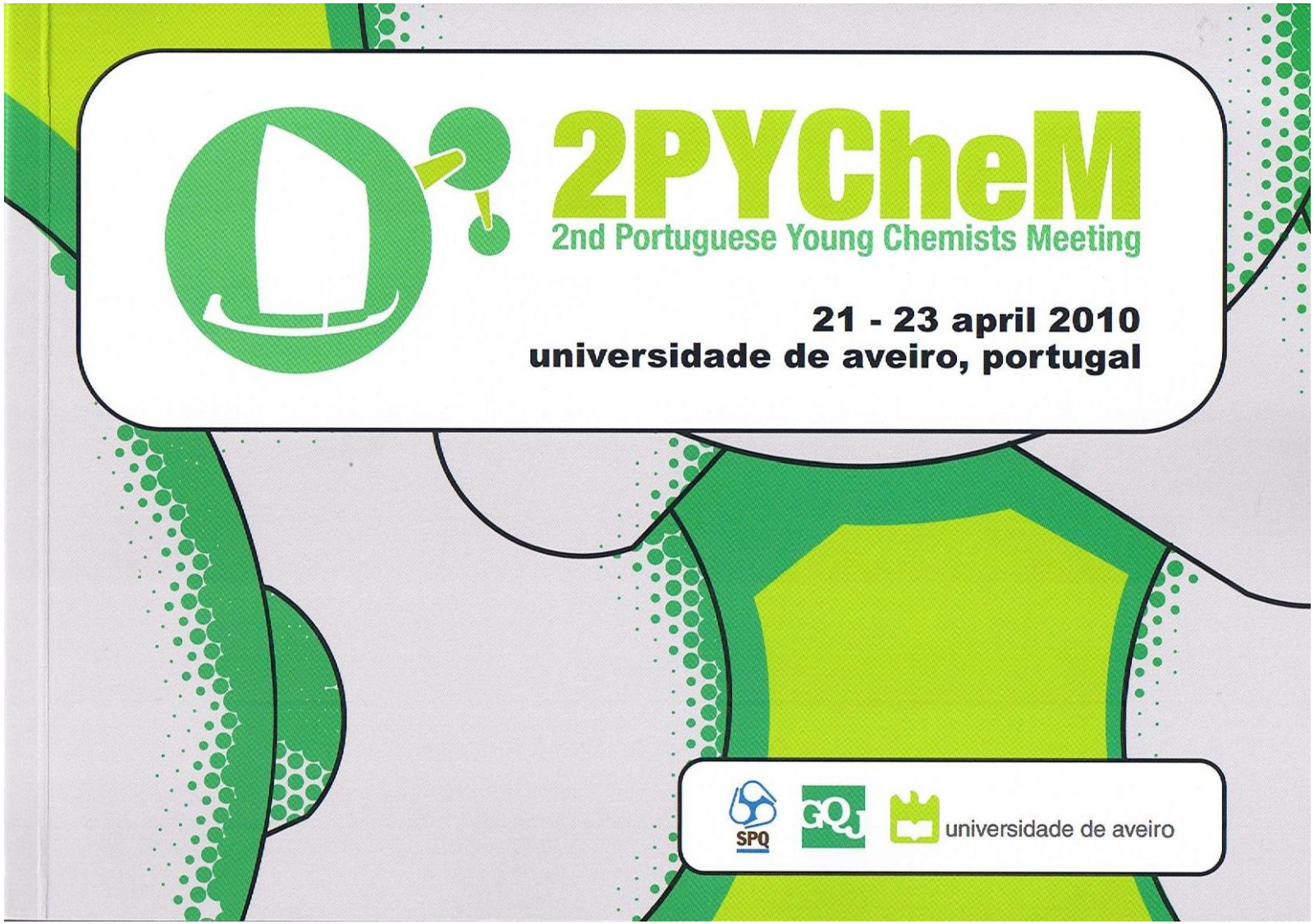
2PYCheM
2nd Portuguese Young Chemists Meeting
21 - 23 april 2010
universidade de aveiro, portugal
SPQ
GQ
universidade de aveiro

Comparative study of the composition of pears dried under different methods

Andreia Loureiro | Raquel Guiné | Maria João Lima | Dulcineia Ferreira

Escola Superior Agrária de Viseu / CI&DETS, Instituto Politécnico de Viseu, Quinta da Alagoa, Estrada de Nelas, 3500-606 Viseu

raquelguine@esav.ipv.pt

Drying of agricultural products under direct sunlight is the traditional way of preserving many fruits and vegetables. The use of the sun to dry foods has the advantage of being cheap. However there are some disadvantages, such as intensive labor and slowness of the process. Moreover, several factors make solar drying less attractive, such as: climatic conditions, product pollution from dust or from animal contamination, and other types of infestation and microbial or mould contamination in humid environments [1].

In Portugal, pears of the variety S. Bartolomeu (*Pyrus communis L.*) have been used to produce a traditional product named "*pêra passa de Viseu*". These pears are dried at direct open air sun exposure, following a multi-step procedure. However, this procedure does not comply with modern quality standards, and therefore in the last years some investigation around this product and the production method has been carried out to better understand it and establish alternative production techniques [2,3]. Among these alternatives, a solar stove with forced convection and a solar stove with natural convection were developed.

In the present work pears of the variety S. Bartolomeu were dried following the traditional method at direct solar exposure and also inside the two stoves developed. The chemical properties were analyzed and quantified in the pears dried by the 3 systems, having in mind to find out which system allows the obtaining of a product more similar to the traditional pears.

From the results obtained is possible to see that the drying carried out inside the solar stoves dos not produce fruits much different than those dried by the traditional method.

Acknowledgments

The authors thank FCT for financial support through project PTDC/AGR-ALI/74587/2006.

References

[1] Karathanos VT, Belessiotis VG. *Journal of Food Engineering* **31** (1997) 35.

[2] Barroca MJ, Guiné RPF, Pinto A, Golçalves FM, Ferreira DMS. *Food and Bioproducts Processing* **84** (2006) 109.

[3] Guiné R, Lopes P, Barroca MJ, Ferreira DMS. *International Journal of Academic Research* **1** (2009) 46.