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Book of Abstracts of the 1st Congress on Food Structure Design

Fundação Dr. António Cupertino de Miranda, Porto, Portugal

15-17th October 2014

This volume contains the abstracts presented at the **1st Congress on Food Structure Design**, held in Fundação Dr. António Cupertino de Miranda, Porto, Portugal, 15-17th October, 2014.

Title: **Book of Abstracts of the 1st Congress on Food Structure Design**

Editors: A. A. Vicente, C. L. M. Silva, L. Piazza

First edition: October 2014
ISBN: 978-989-97478-5-2

Publisher:
Universidade do Minho, Departamento de Engenharia Biológica
Campus de Gualtar, 4710-057 Braga, Portugal
Universidade do Minho

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Ref: 4414

Acceptability of reengineered Hibiscus drinks by Senegalese consumers

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Keywords: Hibiscus, bissap, Senegalese consumers, consumer acceptance, About-Right Scales (JAR), Check-All-That-Apply questions (CATA)

Abstract

Bissap is a non-alcoholic drink commonly consumed in African countries, particularly in Senegal. It is made from *Hibiscus sabdariffa* L. - an herbaceous plant belonging to the Malvaceae, most often from its Ordinary/Kor (Senegal) and/or Vimto (Sudan) varieties. Past research has shown that Hibiscus drinks are generally rich in vitamins, minerals and bioactive compounds. These drinks are amongst the products investigated by AFTER, an EU FP7-funded research project aiming at the production of good quality (nutritional and sanitary) and extended shelf-life products of African tradition for local and European markets.

A previous AFTER study on the acceptability of four traditional Hibiscus drinks by a sample of Senegalese consumers uncovered significant effects of plant variety and processing method. This highlighted the importance of harmonizing the sensory profile of these drinks as part of the product re-engineering process, and re-assessing their acceptability amongst the Senegalese population.

In view of this, three new Hibiscus (50% Kor and 50% Vinto) drinks – an infusion, a syrup and a vacuum-concentrate – were developed by AFTER researchers. Their sensory quality was evaluated, alongside that of a traditional infusion (baseline), by a sample of 156 Senegalese in Dakar in October-November of 2013. Consumer profiling techniques based on hedonic acceptance, Just-About-Right intensity evaluation of specific descriptors (JAR) and Check-All-That-Apply questions with sensory and emotional descriptors (CATA) were used to establish sensory profiles and preference maps. Descriptors and other relevant evaluative information were obtained through two exploratory focus groups.

Results show that the new Hibiscus drinks all had better acceptability than the baseline. Moreover, three distinct types of Senegalese consumers were identified: baseline dislikers, who liked all drinks except traditional one; overall likers; new Infusion dislikers.
Finally, multiple factor analysis of overall liking scores, JAR ratings and CATA answers yield highly convergent results for all the drinks evaluated.

Acknowledgements: This study was performed within the European Seven Framework program (EU FP7) and fits into the project AFTER (African Food Tradition Revisited by Research) under contract nr. 245025 and the National Funds from FCT – Fundação para a Ciência e a Tecnologia through project PEst-OE/EQB/LA0016/2013 provided funding for the realization of this work. More information about the project can be found on http://www.after-fp7.eu/