

Consumers' sensory perception and acceptability of Hibiscus drinks: a cross-cultural study in Europe

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Important differences can be observed between consumers from different countries due to the strong impact of culture on food preferences and acceptance, while a less important effect is usually expected in sensory perception. In the present study consumer's sensory perception, preference and acceptability of Hibiscus drinks (an African functional drink rich in anthocyanins) were evaluated in three European countries: United Kingdom, France and Portugal. The drinks were developed under the scope of AFTER, an EU FP7-funded research project aiming at the production of improved quality and extended shelf-life products of African tradition for local and European markets. Hibiscus drinks are rich in nutrients and their consumption is widespread in Africa and Asia, but they still are quite unknown amongst European consumers.

The sensory quality and acceptability of two Hibiscus drinks developed by AFTER researchers, as well as a traditional infusion prepared from Hibiscus flowers (baseline), were evaluated by 3 independent samples of consumers (France n=143; United Kingdom n=126; Portugal n=124) from March to June 2014. All factors concerning consumers' socio-demographic profiles and materials were maintained as similar as possible. To gather evaluative relevant information and maximize the equivalence between questionnaires, exploratory local focus groups were held.

Consumer profiling techniques based on hedonic acceptance, Just-About-Right intensity evaluation of specific descriptors (JAR) and Check-All-That-Apply questions (CATA) were used to establish sensory profiles and preference maps. Additionally, the chemical composition of the drinks was evaluated and a conjoint analysis was held to determine how consumers valued the composition and African origin of the drinks.

Similar preference profiles for the Hibiscus drinks were obtained for the three countries but significant differences were observed in relation between consumers' acceptance, with French consumers being generally the most appreciative. Importantly, these differences in acceptance were significantly correlated with the drinks sensory profiles and chemical composition.