

Sweet perception in Distillates



Author: Sonia Petignat-Keller, Daniel Baumgartner, Anna Bozzi Nising

corresponding author: sonia.petignat@acw.admin.ch

Introduction

Sensory characteristics as well as economic arguments are major drivers of alcohol and sugar content in distillates.

At which drinking strength the flavor of a distillate develops best, is not clearly defined. Different opinions arise due to various reasons like gustatory influences, product habits, food law and financial aspects.

Ideal sensory characteristics of cherry distillates (Kirsch) in context to drinking strength and preference of sugar content was subject of this study.

Materials and Methods

Raw material, Production method

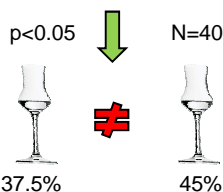
A single variety of cherries was fermented during 21 days and distilled over two bubble plates with dephlegmator yielding a final alcohol content of 82% (v/v). Sensory assessment of the distillates were carried out after storage at 4°C during 3 months and dilution with deionised water to 5 different drinking strengths: 37.5%, 40%, 42.5%, 45%, 47.5% alcohol (v/v).



Sensory Assessment

Ranking Test with Expert Panel

in regards to drinking strength(%v/v).



Paired Preference Tests

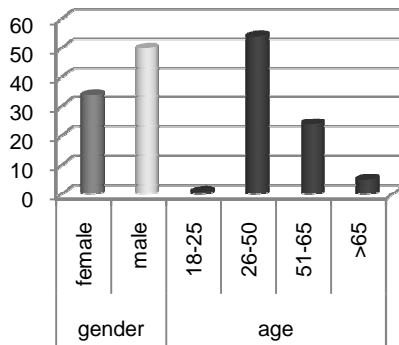
Tests were carried out with 84 consumers in two locations with the significantly different samples in drinking strength (37.5 and 40%v/v) and in addition of 3% sugar to the individually preferred sample. Panelists were asked to freely describe the reason for their preference if possible.



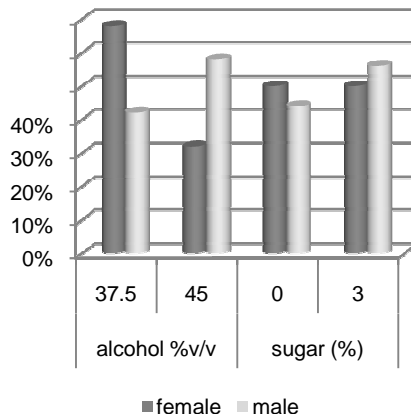
Results

Demographics

N= 84



Preferences



Discussion and Conclusion

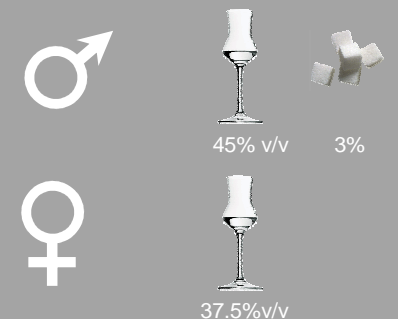
Results show that there is no significant preference overall but looking at gender differences, women prefer lower volume% cherry distillates and men higher volume%.

With regards to sugar content men showed a tendency to prefer the product with the addition of 3 % sucrose however not significantly whereas women were indifferent.

Results also indicated that sucrose brings out fruitiness in lower alcohol volume% and increases burning and hot trigeminal characteristics of "Kirsch" with higher alcohol volume%.



Conclusion



Different consumer segments require tailor-made cherry distillates with regards to drinking strength and sugar content.

