

INFLUENCE OF THE STALK DURING GAMARET SWISS RED WINE VINIFICATION

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Introduction

Consumers want to taste young and fresh red wines while keeping a potential for aging without adding non-vine products. The oenologists must, therefore, consider this market evolution using more natural methods.

Stalks could bring benefits to the wine such as alcoholic reduction, color protection or improvement of the tannic intensity. This study aims to measure sensory and analytically the impact of stalk addition during vinification of Swiss grape varieties, such as Gamaret.



Material & Methods

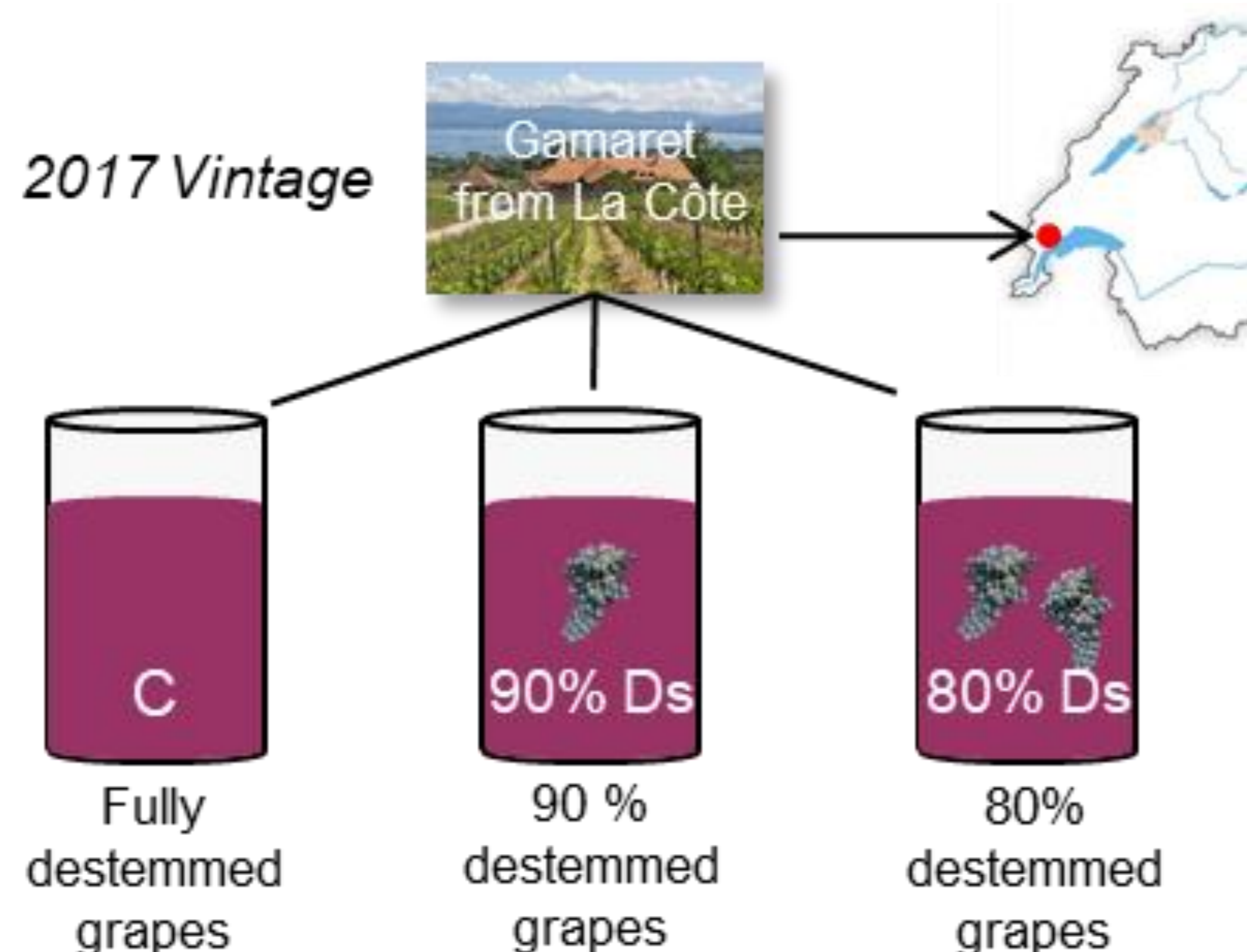


Figure 1. Experimental design of the study with 3 variants with Swiss grape varieties: Gamaret (vintage 2017).

From a destemmed vintage (2017), variants have been created following 3 conditions : C, control fully destemmed, 90% Ds, containing 10% of whole grapes and 80% Ds, containing 20% of whole grapes. Sensory and analytical data were measured and statistically treated.

Impact of stems on fermentation kinetics

In terms of fermentative kinetics, fermentation temperatures and total polyphenol concentrations, the addition of stalk did not have any influence. The concentrations of acids (tartaric, malic, lactic, acetic) were similar between the different variants.

Wines sensory analysis

Sensory analysis were performed with expert panel of 13 judges of Changins. Four products were evaluated on 6 olfactory and 6 gustatory descriptors on a 0 to 10 scale. Hedonic evaluation was also performed.

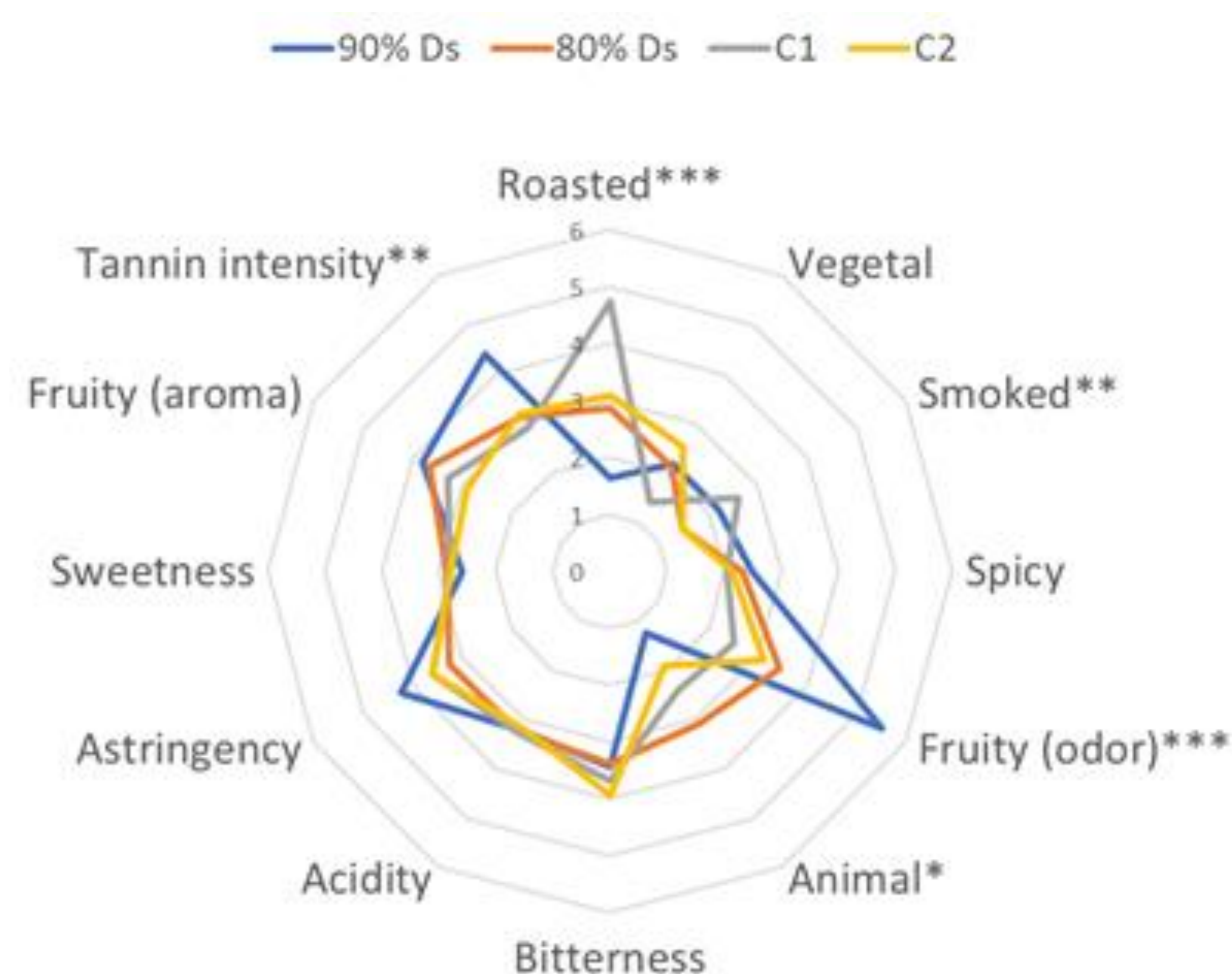


Figure 2. Spider plot with the average intensity of the descriptors after the sensory profile. ***, **, * indicates significant difference at respectively 15%, 10% and 5% level.

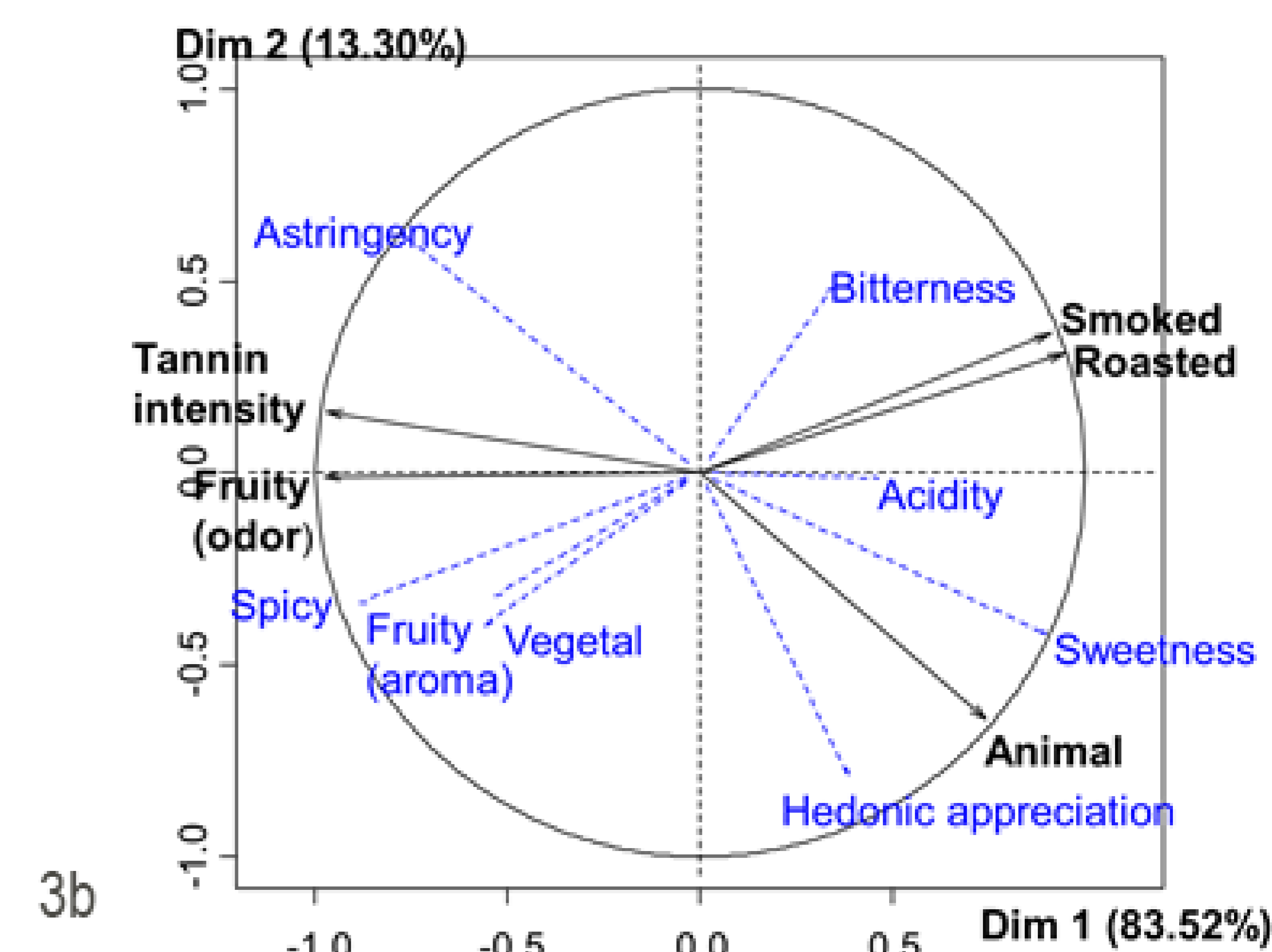
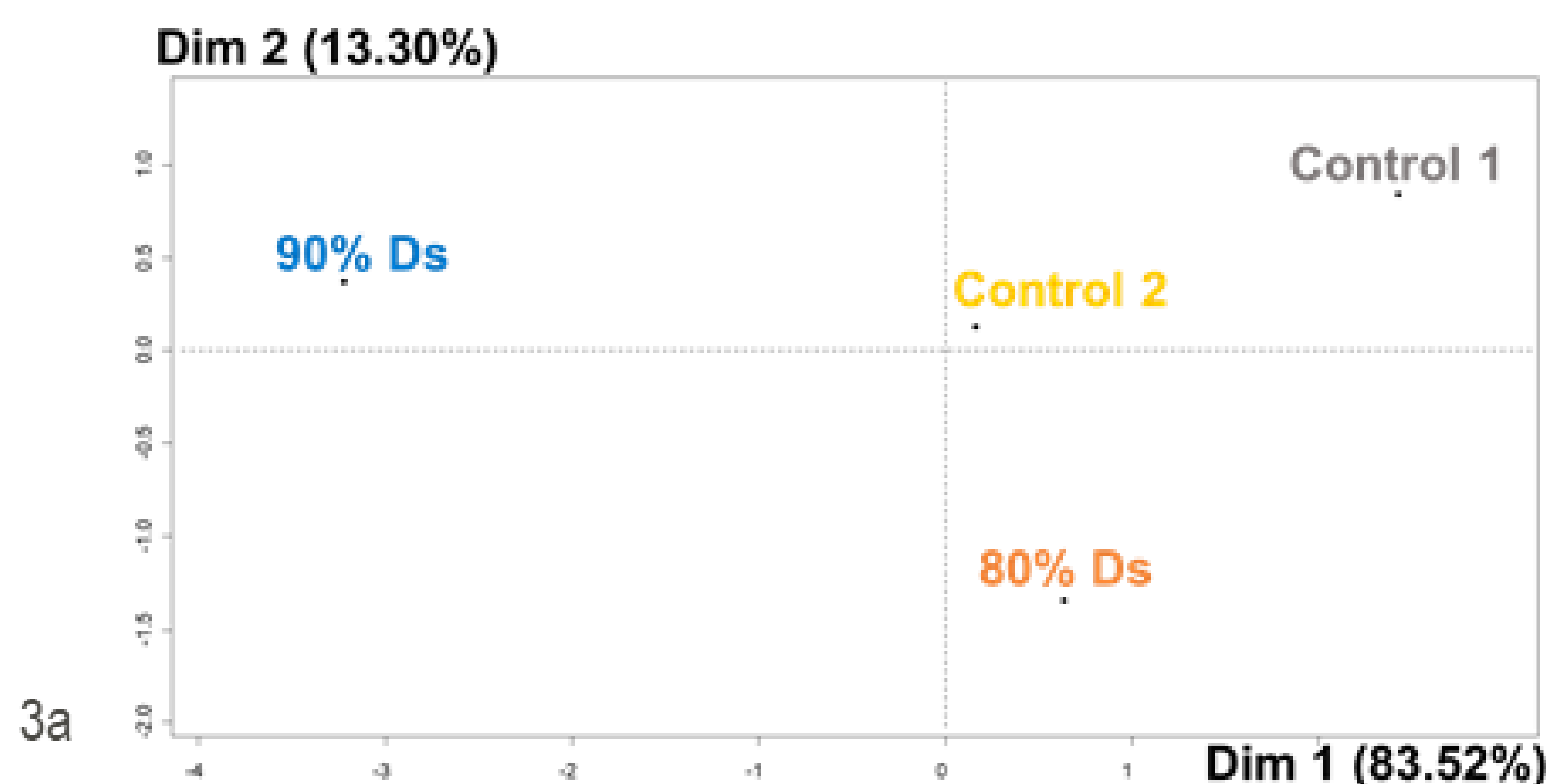


Figure 3a and 3b. Map of the products and correlation circle for the Principal Components analyses (PCA). In back, significant descriptors at 5% level. In blue, descriptors not significant at 5% level and appeared as illustrative variables.

Conclusion

- There is no effect of use of stems on the AF kinetics or polyphenol extraction. But significant difference were observed on sensory aspects.
- These differences could not be explain only by the presence of stalks.

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