

Evaluation of aroma compounds of coffee pulp (*Coffea arabica* L.) fermented with commercial and indigenous yeast

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Introduction

Coffee pulp, constitutes ~42 % of the cherry is usually discarded, generating pollution, despite its richness in bioactive compounds such as antioxidants, phenols, and caffeine. The objective of this work was to evaluate the volatile and non-volatile compounds formed by fermentations with commercial *S. cerevisiae* yeast (LALLEMAND®) and with indigenous yeast (*Hanseniaspora* sp., *P. kudriavzevii*) and LAB (*Lpb. plantarum*) isolated from cocoa fermentation, seeking to improve aroma and flavor and generate a functional beverage.

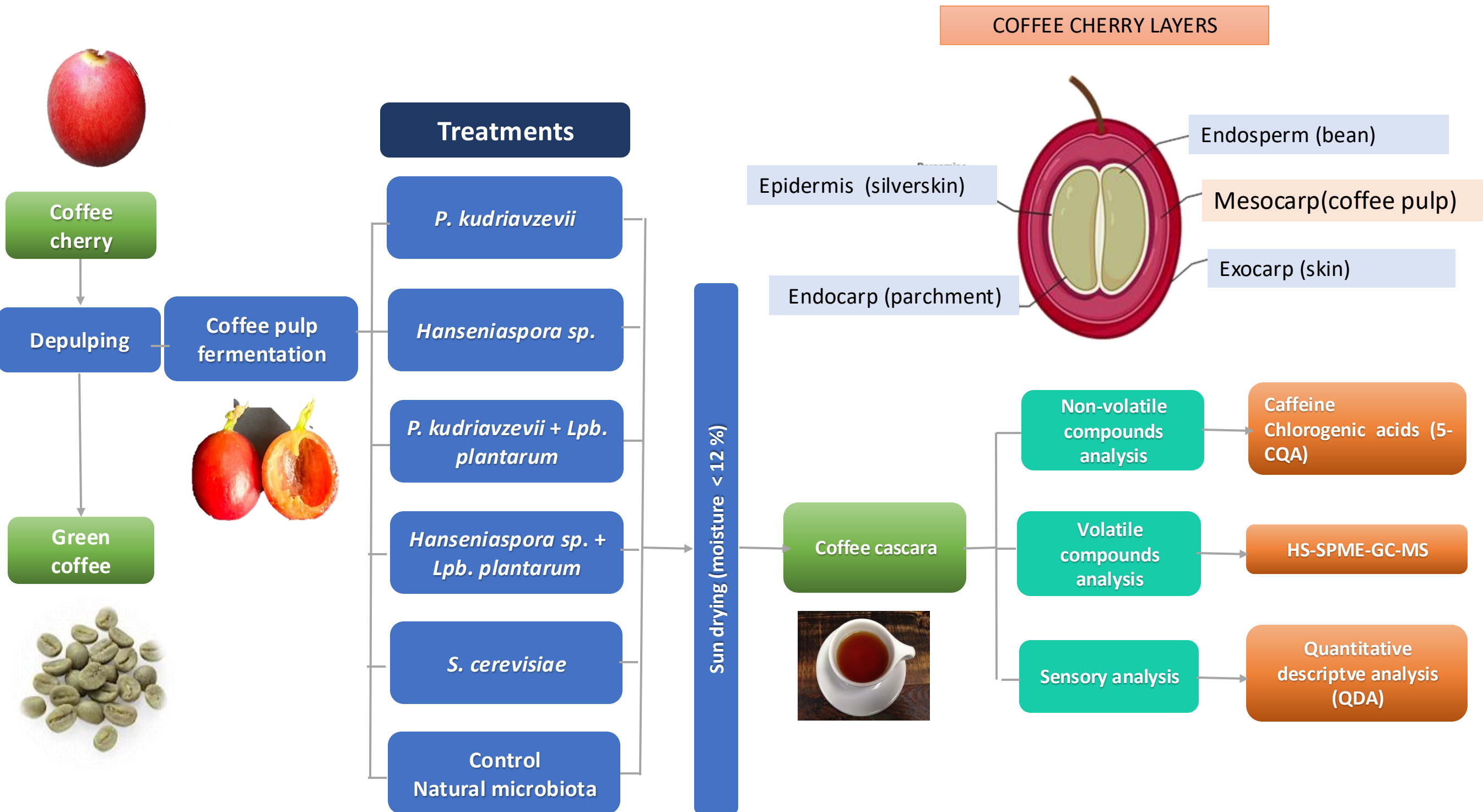


Figure 1: General methodology diagram

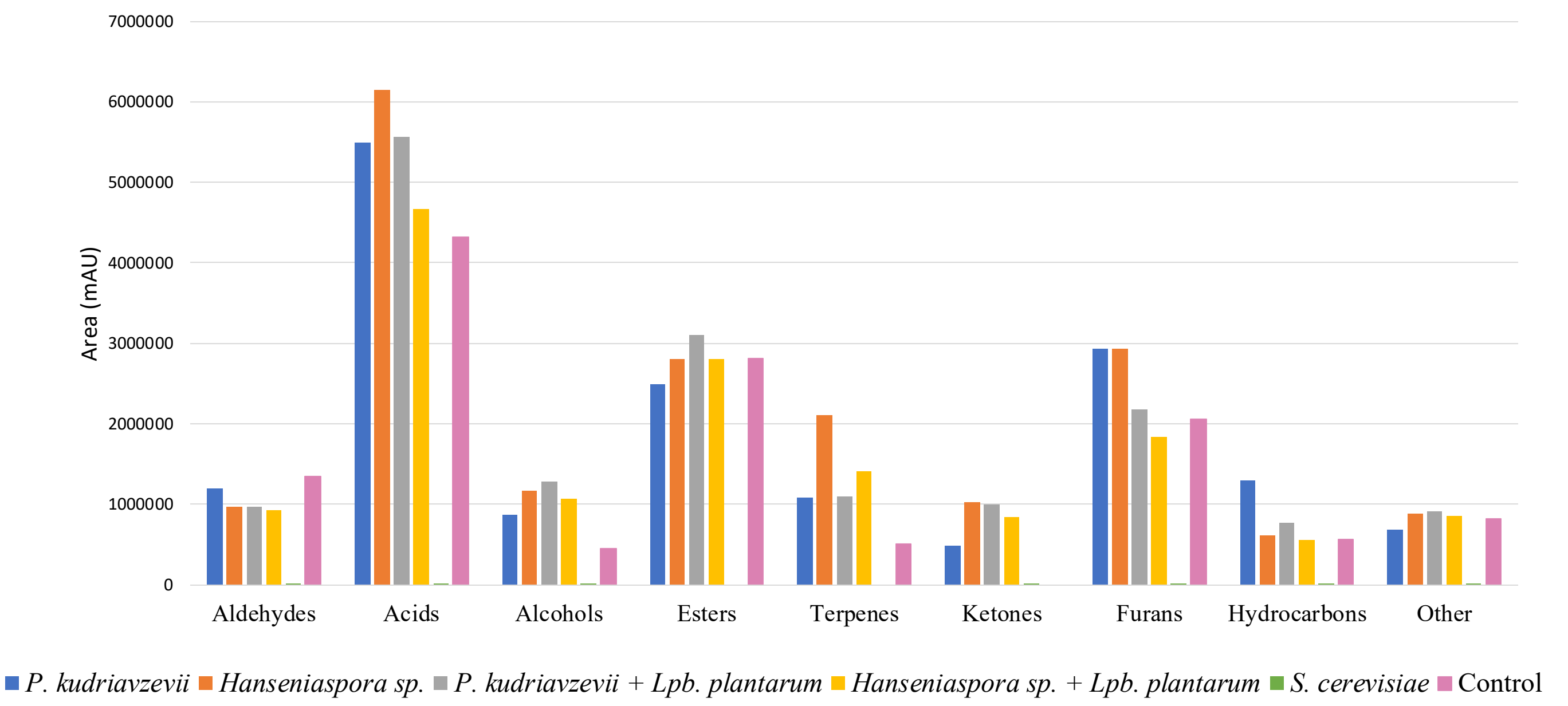


Figure 2: Average VOCs area per family

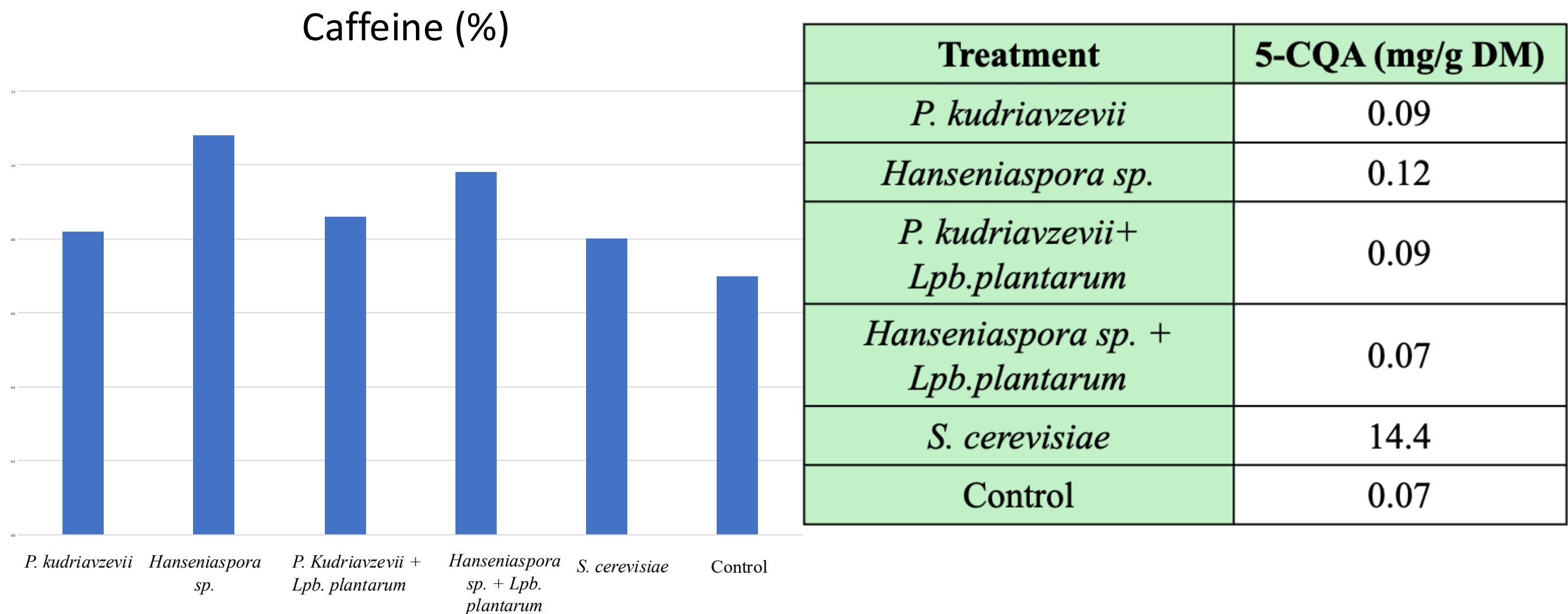


Figure 3: Caffeine and 5-CQA content in the treatments

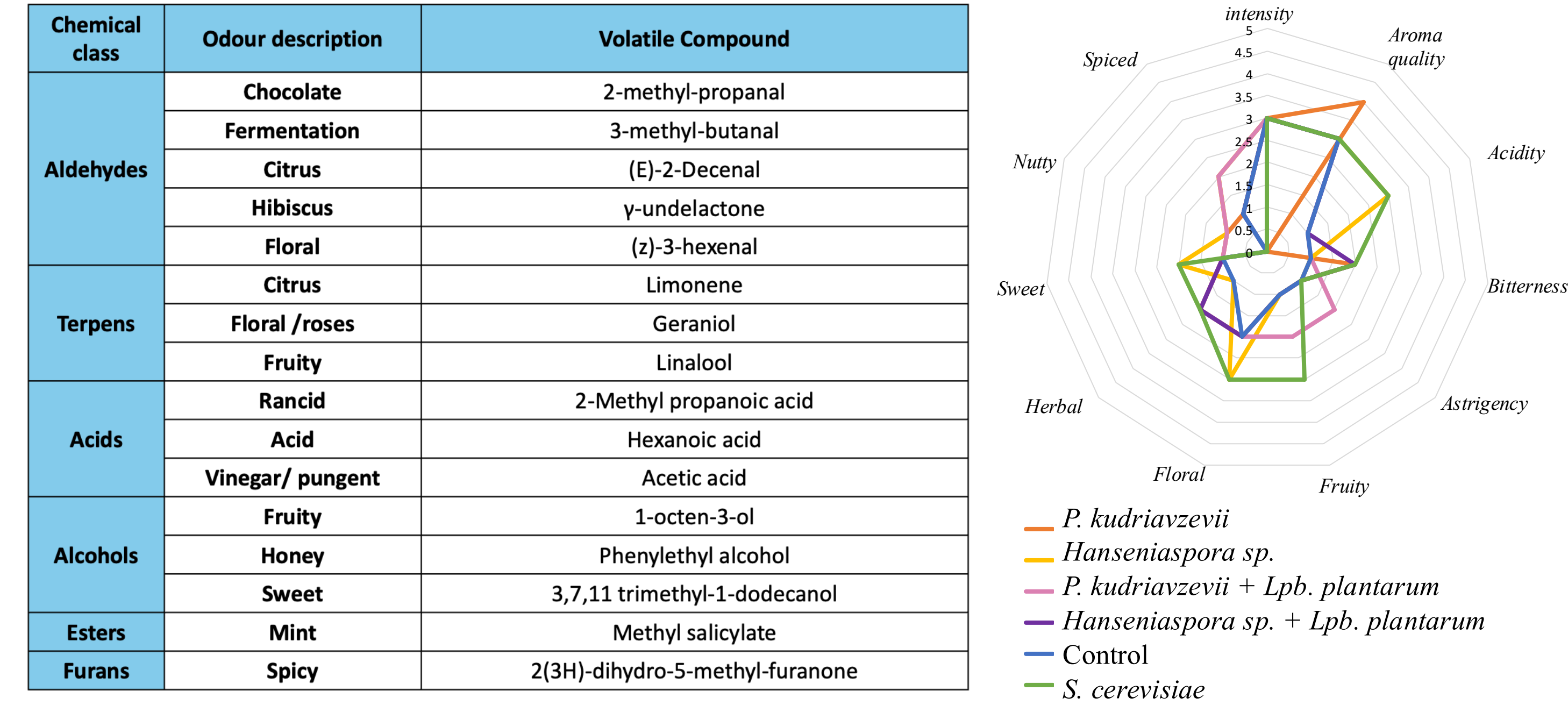


Figure 4: Main odorant notes identified and aroma descriptive analysis

Conclusion/Perspectives

The use of fermentations with commercial and indigenous yeasts from cocoa fermentation allows to increase the desirable aromatic notes compared to natural fermentation favoring the obtaining of products with better flavors and aromas, especially *S. cerevisiae* fermentation. It is recommended to increase the fermentation time to observe the effects.

References:

Komaria, N., Suratno, Sudarti, & Dafik. (2021). The effect of fermentation on acidity, caffeine and taste cascara robusta coffee. Journal of Physics: Conference Series, 1751(1).
DePaula, J., Cunha, S. C., Cruz, A., Sales, A. L., Revi, I., Fernandes, J., Ferreira, I. M. P. L. V. O., Miguel, M. A. L., & Farah, A. (2022). Volatile Fingerprinting and Sensory Profiles of Coffee Cascara Teas Produced in Latin American Countries. Foods, 11(19). DOI: 10.3390/foods11193144