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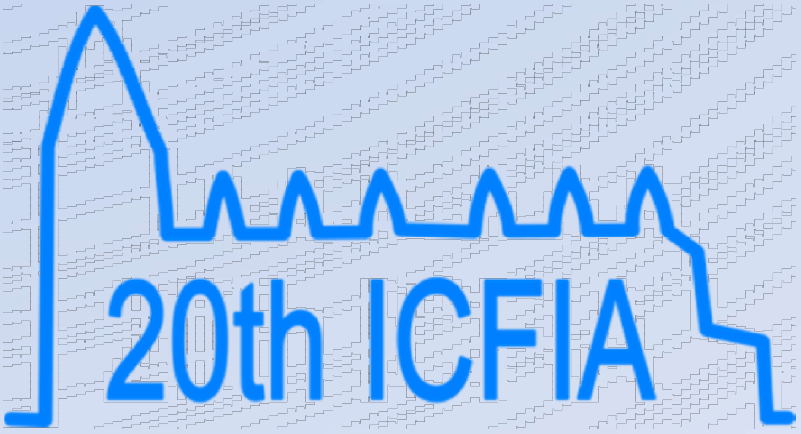

OP6

A flow-based platform for measuring the acidity parameters in wine

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Acidity in wine is an important routine parameter, as it is an index of wine character and quality. The acidic compounds can influence the colour, taste and the stability, either microbiologically or chemically, of the wine. Acidity in wine can be divided into two categories: volatile acidity referring to the acids that can be removed by steam distillation; and fixed acidity, describing the poorly volatile ones. Total acidity is the combination of both categories. A flow injection system for the quantification of total acidity in wine was already presented by the authors [1]. Due to the versatility of the sequential injection analysis (SIA) system, the platform was then changed to develop methods for both determinations, for the volatile and total acidity in wine. The fixed acidity is achieved from the difference between total and volatile acidity. For the total acidity quantification, the aspirated sample merges with the carrier solution on the way towards detection. For the volatile acidity assay, the aspirated sample is propelled towards the donor channel of a gas diffusion unit (GDU) while in the donor stream is the colour reagent. The quantification is achieved as the reaction product formed in the acceptor channel of the GDU is propelled towards detection. The features of each methodology will be presented.

References

[1] S.S.M.P. Vidigal, A.T.C. Ramos, A.O.S.S. Rangel, Food Anal. Meth., 2016.

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