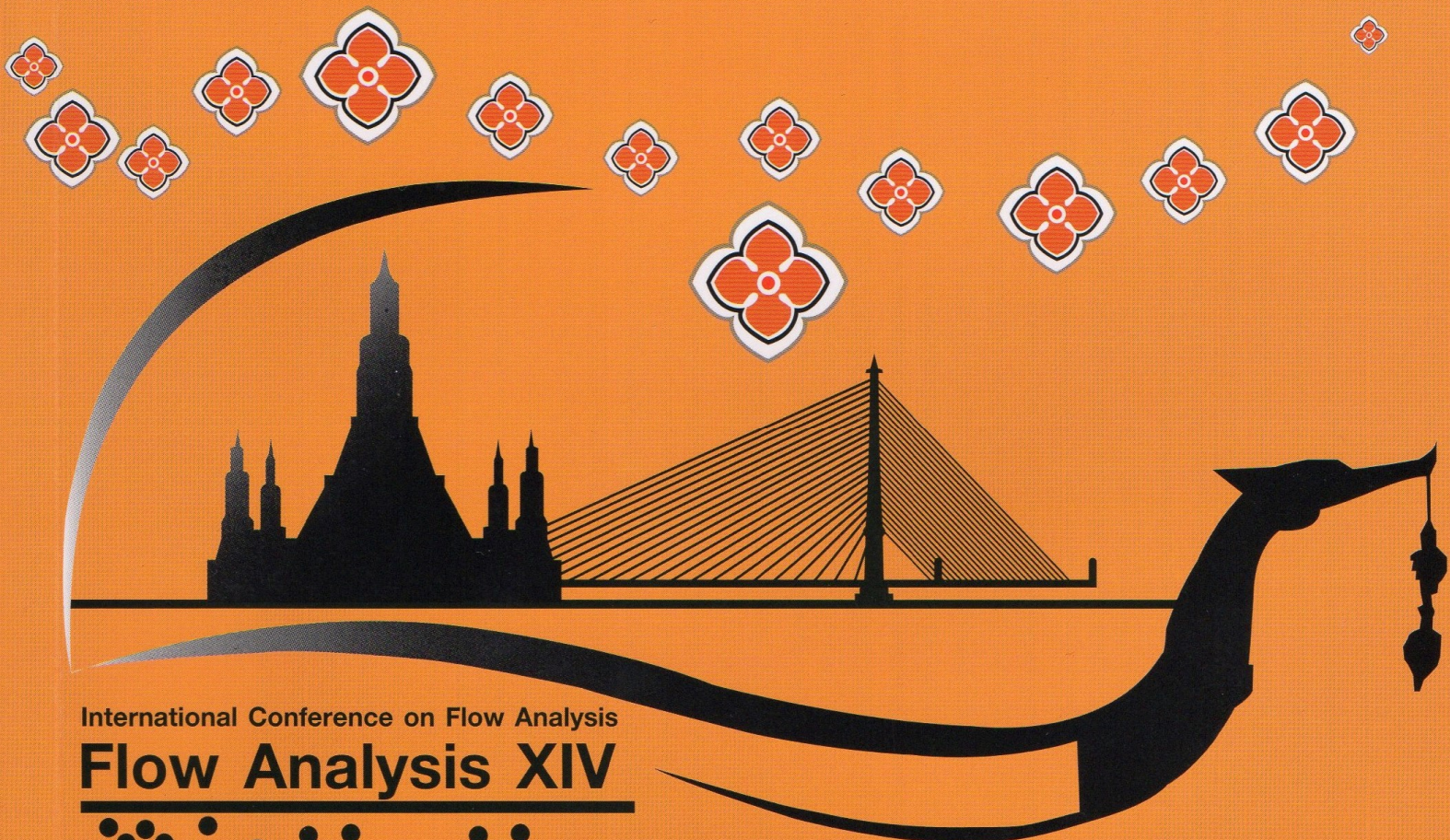


# Abstract book

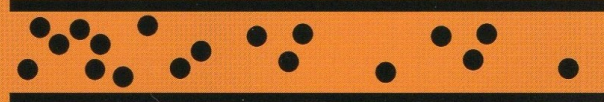
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FIA MPAD อาหาร 2018 GC MBLVP  
CE การเตรียมตัวอย่าง 14th การวิเคราะห์  
SIA quantitative Solid phase extraction  
SIEMA ตัวอย่าง  
MSFIA 2018 analysis  
Sample สเปกโทรสโกปี SIA CIA spectroscopy  
Electrochemistry 2018 เคมีไฟฟ้า  
สิ่งแวดล้อม

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# Determination of titratable acidity in wines in an automatic spectrophotometric analytical microsystem

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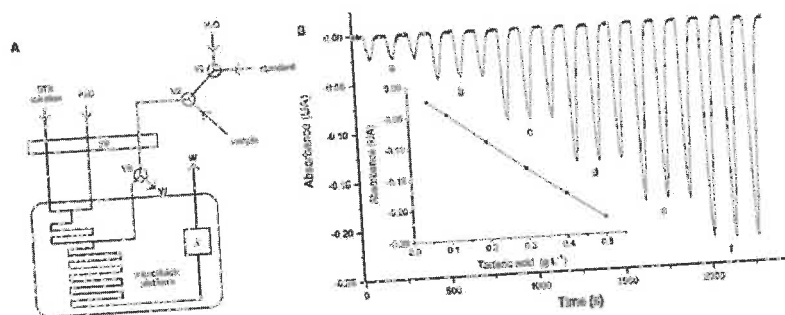
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## Abstract

Titratable acidity is one of the key parameters of wine due to its closed relationship with the quality and character of the final product. Its control during wine production as well as in the final product is of great interest for wineries in order to ensure the desired characteristics.

The herein work presents an automatic continuous flow spectrophotometric microanalyzer for monitoring titratable acidity in wine, displaying low reagents and sample consumption, simple instrumentation, high portability and high throughput. The microsystem, presented in the figure below, comprises a peristaltic pump, three programmable three-way microvalves, the microfluidic platform and the miniaturized optical detection system. The methodology is based on the decolouration of the buffered bromothymol blue (BTB) in the presence of the sample or standard, introduced as a time-based approach. It was possible to establish a linear relationship up to 0.5 g/L of total acidity, expressed as tartaric acid, displaying detection and quantification limits of 0.01 g/L and 0.03 g/L, respectively. The system was applied to the determination of titratable acidity in white, rosé and red table wines.



**Keywords:** Microfluidic device, total acidity, spectrophotometry, wine samples

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