



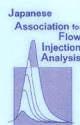
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LOW PRESSURE CHROMATOGRAPHIC FLOW SYSTEM FOR WINE FERMENTATION MONITORING

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Wine is an alcoholic beverage produced from fermented grapes or other fruits. To produce wine and not grape juice, it is necessary to promote a fermentation process. This fermentation process, described in a very simple way, is carried out by yeast to convert sugars into ethanol. The quality of the produced wine is conditioned by the fermentation process, since other secondary products, besides ethanol, are also produced. The time required for this process differs on the type of grape and on the method of winemaking. The question raised is how the fermentation procedure can be monitored.

It would be interesting to arrange an analytical tool that in one simple assay, in a very short time, could determine the concentration of sugars and ethanol. In this scenario, it is feasible to monitor the decrease in the concentration of sugars and the increase in the ethanol concentration.

In order to develop this analytical tool, a system based on flow injection analysis coupled to a guard chromatographic column was designed. The diluted sample is injected in the flow stream and the target analytes (sugars and ethanol) are separated and quantified spectrophotometrically using a CCD detector connected to the column outlet.

The proposed tool was tested in wine samples.

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