



Analysis of Glycyrrhizic acid in Liquorice Extracts and Infusions



Capillary Electrophoresis can help industrial actors to reduce their analysis costs

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INTRODUCTION

Glycyrrhizic acid (GA) is a Active Ingredient of liquorice. This molecule is found in the roots in potassium or calcium salt forms. GA concentration must be controlled in the food products. The Application Note carried out in collaboration with Antésite & Noiroit Company demonstrates the use of Capillary Electrophoresis for GA determination in Liquorice Extracts and Infusions. The developed method was easy-to-implement and robust.

STANDARD AND REAL ANALYSIS

Buffer : buffer pH 8.0

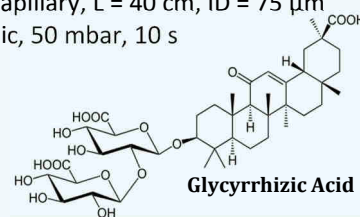
Capillary : fused-silica capillary, L = 40 cm, ID = 75 μ m

Injection : hydrodynamic, 50 mbar, 10 s

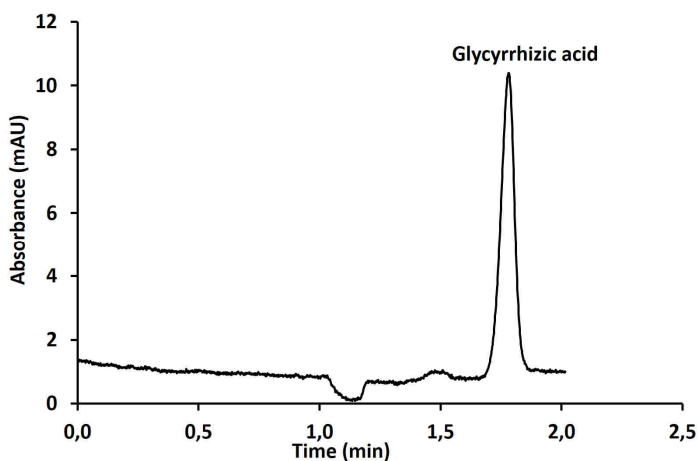
Voltage : +20 kV

Detection : UV, 254 nm

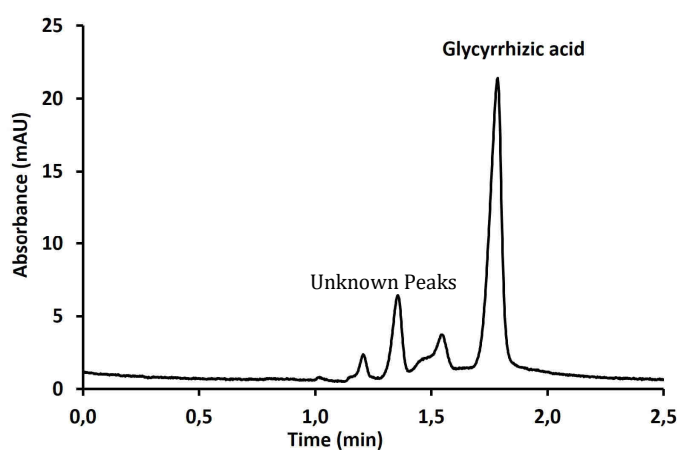
Temperature : 25 °C



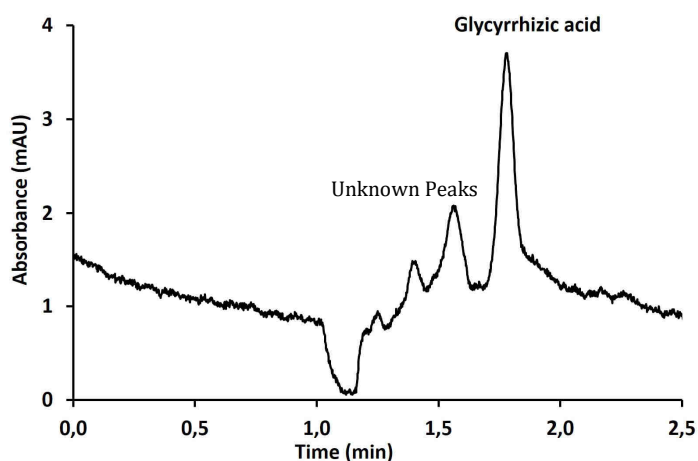
Standard Analysis : GA at 100 mg/L



Real sample #1 : Liquorice Extract (dilution 1/1000)



Real Sample #2 : Liquorice Infusion (dilution 1/1000)



Quantitation Results

	Referenced Method	CE results	Relative Mean Deviation (%)
Extract	16.9 %*	16.8 %*	0.6
Infusion	20 mg/L	24 mg/L	20.0

* expressed in Mass concentration

Hypothesis : According to littérature, unknown peaks could be α and β glycyrrhetic acids