



Determination of ascorbic acid in Vitamin C tablet and orange juice



Ideal example for experimental teaching

Cédric SARAZIN
Analytical Application Lab. Manager

INTRODUCTION

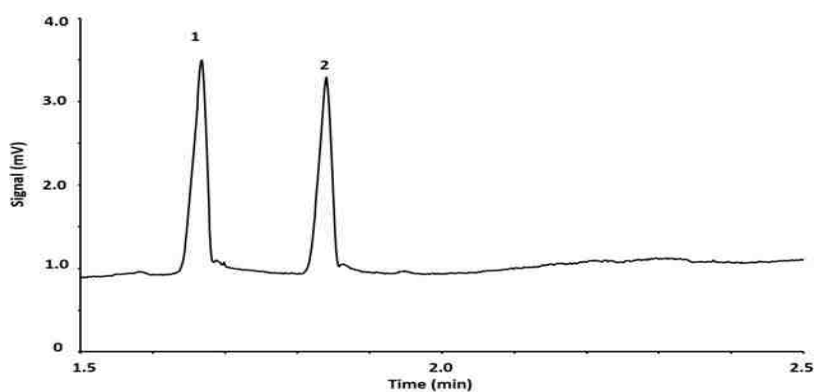
Determination and quantitation of ascorbic acid and lactic acid in Vitamin C effervescent tablet and orange juice using Wyn-CE capillary electrophoresis system and a easy and sensitive contactless conductimetry detection (C4D).

SEPARATION CONDITIONS

Buffer : MES + Histidine + CTAB, pH 6.1
Capillary : bare-fused silica, L = 70 cm, l = 40 cm, ID = 50 μ m
Injection : hydrodynamic, 50 mbar, 6 s
Voltage : -30 kV
Detection : C4D, frequency 250 kHz, A = 100%
Temperature : 25 $^{\circ}$ C

Standard sample :

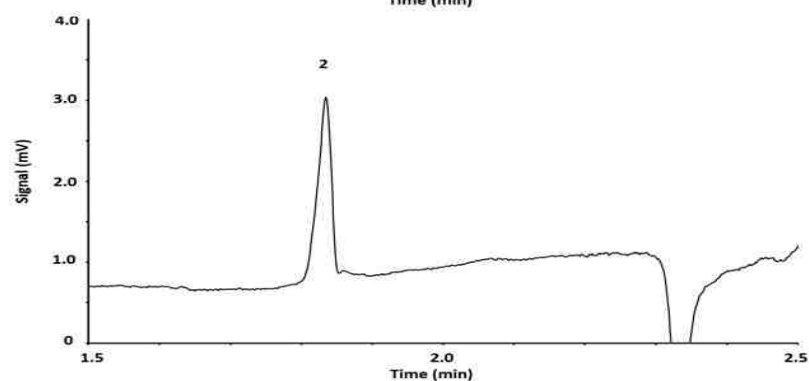
1-lactic acid ; 2-ascorbic acid ;
Concentration : 500 μ M



Vitamin C Effervescent tablet :

(dilution 1/100)
2-ascorbic acid (540 μ M);

Commercial Vitamin C Effervescent Tablet contained Ascorbic Acid 56 mM. Our developed method is in good agreement (Quantitation 54 mM in non-diluted extract)



Orange juice :

(dilution 1/200)
2-ascorbic acid (600 μ M) ;
*, unidentified peaks

