



Determination of cations in wastewater and surface water



Sample prep. : Real samples were just filtered and diluted

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INTRODUCTION

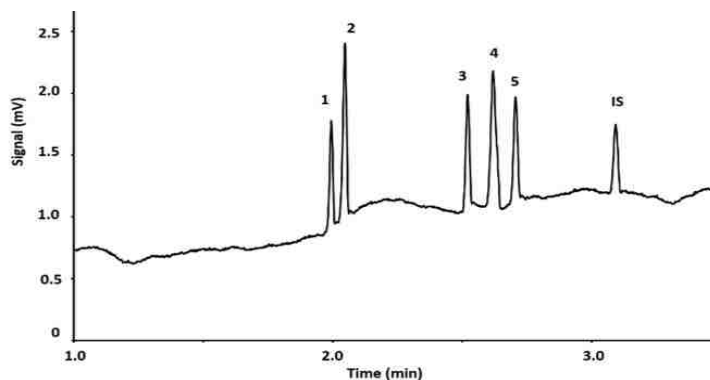
Determination and quantitation of K^+ , NH_4^+ , Na^+ , Ca^{2+} , Mg^{2+} cations in wastewater and surface water using Wyn-CE capillary electrophoresis system and an easy to use and sensitive contactless conductimetry detection (C4D).

SEPARATION CONDITIONS

Buffer : Glacial acetic acid + L-Histidine + 18-C-6, pH 4.1
Capillary : bare-fused silica, L = 65 cm, l = 50 cm, ID = 50 μm
Injection : hydrodynamic, 50 mbar, 8 s
Voltage : +30 kV
Detection : C4D, frequency 500 kHz, A = 100%
Temperature : 25 $^{\circ}C$

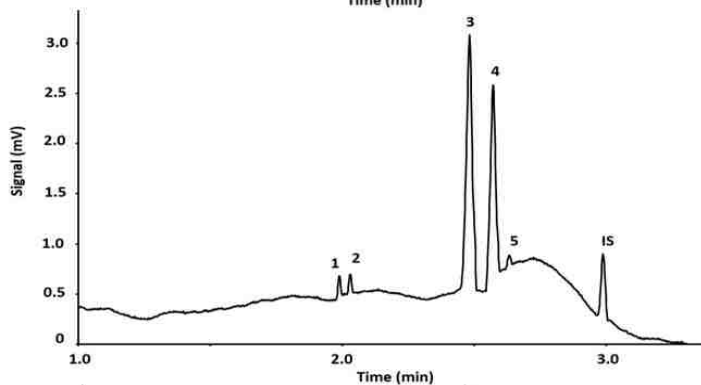
Standard :

1- NH_4^+ ; 2- K^+ ; 3- Ca^{2+} ; 4- Na^+ ; 5- Mg^{2+}
 Concentration : 20 μM . (IS = Li^+ , 20 μM)



Wastewater :

(Dilution 1/5000)
 1- NH_4^+ (4 μM) ; 2- K^+ (2 μM) ; 3- Ca^{2+} (57 μM) ;
 4- Na^+ (51 μM) ; 5- Mg^{2+} (2 μM) ; (IS = Li^+ , 20 μM)



Surface water :

(Dilution 1/10)
 1- NH_4^+ (3 μM) ; 2- K^+ (4 μM) ; 3- Ca^{2+} (45 μM) ;
 4- Na^+ (40 μM) ; 5- Mg^{2+} (23 μM) ; (IS = Li^+ , 20 μM)

