



Determination of Potassium and Sodium Cations in Serum



Fast and sensitive method for diagnostic with a low sample volume needed (1 μ L)

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INTRODUCTION

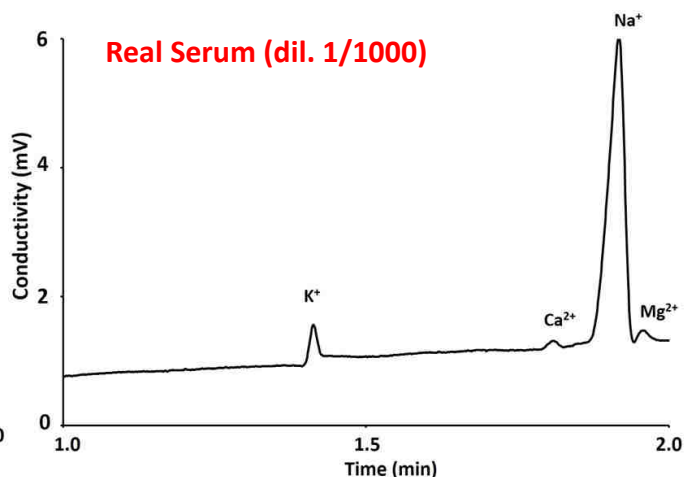
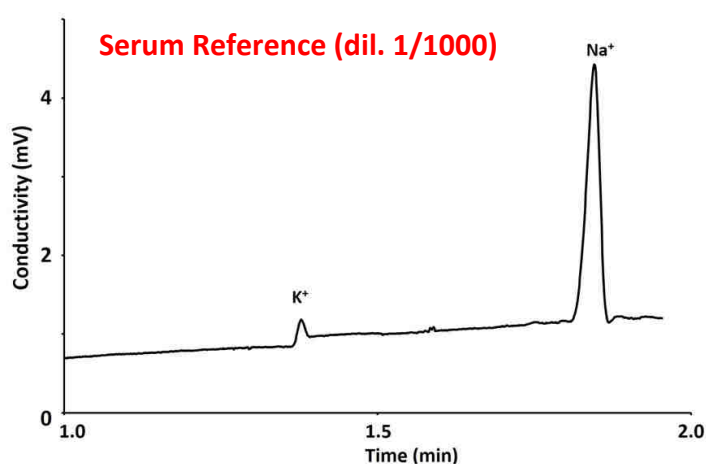
The balance of electrolytes in the body is maintained by a function called homeostasis. Diagnosis of sodium and potassium levels are determined with a blood test. This Application Note describes K^+ and Na^+ cations analysis in serum with Wyn-CE system and a contactless conductimetry detection (C4D).

STANDARD AND REAL ANALYSIS

Buffer : Glacial Acetic Acid + L-Histidine, pH 4.1
Capillary : bare-fused silica, L = 55 cm, l = 35 cm, ID = 50 μ m
Injection : Hydrodynamic, 50 mbar, 7 s
Voltage : +30 kV
Detection : C4D
Temperature : 25 $^{\circ}$ C

INFORMATION:

- Normal potassium levels range between 3.6 to 4.8 mM
- Normal sodium levels are between 135 to 145 mM
- Samples were directly injected in Eppendorf Vials



Comparison of Quantitation Results between WynSep Wyn-CE system and Biochemistry Analyzer

Quantitation	Serum Reference (dil. 1/1000) (mM)		Real Serum (dil. 1/1000) (mM)	
	K^+	Na^+	K^+	Na^+
Wyn-CE System	3.6	134.1	4.5	159.3
Biochemistry Analyzer	3.8	137.8	4.2	157.2