Potassium Reagent Kit

Colorimetric Test

IVD CE

PRODUCT CODE
CE005

INTENDED USE
This reagent kit is intended for the "In Vitro "quantitative determination of Potassium in Serum

CLINICAL SIGNIFICANCE
Potassium is an electrolyte that is vital to cell metabolism. It helps transport nutrients into cells and removes waste products out of cells. It is also important in muscle function, helping to transmit messages between nerves and muscles, Elevated potassium levels (hyperkalemia) are often associated with renal failure, dehydration shock or adrenal insufficiency. Decreased potassium levels (hypokalemia) are associated with malnutrition, negative nitrogen balance, gastrointestinal fluid losses and hyperactivity of the adrenal cortex, this test measures the amount of potassium in the blood

PRINCIPLE
Potassium reacts with sodium tetra phenol boron in a specially prepared buffer to form a colloidal suspension. The amount of the turbidity produced is directly proportional to the concentration of potassium in the sample.

REAGENT COMPOSITION
Reagent 1: Potassium Reagent
Reagent 2: Potassium Standard 5 mEq/L

REAGENT PREPARATION
The reagent and standard are ready to use.

STORAGE AND STABILITY
The reagents and standard are stable up to the stated expiry date when stored at 15-30 ° C.

SPECIMEN
Serum free from hemolysis
Separate serum from the clot as soon as possible as Potassium may leach from the RBC's which can elevate potassium level.

NORMAL RANGE
Serum/Plasma: 3.5 - 5.5 mEq/L.
It is recommended that each laboratory establish its own normal range representing its patient population.

ASSAY

Wavelength	630 nm
reaction type	Endpoint
Cuvette	1 cm light path
Temperature	Room temp.
Measurement	Against reagent blank

PROCEDURE

Pipette in to cuvettes	Blank	Standard	Sample
Potassium Reagent	1000 µL	1000 µL	1000 µL
Standard	--	20 µL	--
Sample	--	--	20 µL
Mix and incubate for 5 min at room temp. And measure the absorbance of the sample (As) and the standard (A.std) against the reagent blank.			

CALCULATION

$$\text{Concentration of Potassium (mEq/L)} = \frac{\Delta A \text{ sample}}{\Delta A \text{ standard}} \text{X } 5 \text{ (Std. conc.)}$$

LINEARITY
This procedure is linear up to 7 mEq/L. If values exceed his limit dilute the sample with distilled water and multiply results with proper dilution factor.

NOTE
As potassium is a very widely distributed ion, care should be taken to avoid any contamination. All glass wares being used for the test should first be rinsed with 1% or 0.1 N HNO3 and then with good quality deionized water before use.

QUALITY CONTROL
Control serum of known concentrations should be analyzed with each run.

SYMBOL ON LABELS

Symbols	Signify	Symbols	Signify
REF	Catalogue Number	SIZE	Pack Size
	Expiry Date	VOL	Volume
	Storage Condition	LOT	Lot Number
	Instruction for Use	IVD	In Vitro Diagnostics
	Manufacturing Date		Manufacturer
	Number of Tests	2	For Single Use Only
EC REP	EC Representative	CE	European conformity

BIBILOGRAPHY
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