N.S. BIO-TEC

Potassium

Colorimetric, Endpoint

REF: POT-MC- 0620　（ 6X20 ml ）
POT-MC- 0420　（ 4X20 ml ）
POT-MC-0225　（ 2X25 ml ）

INTENDED FOR USE:
For the quantitative determintion of **Potassium** in serum.

PRINCIPLE:
The amount of potassium is determined by using sodium tetraphenylboron in a specifically prepared mixture to produce a colloidal suspension. The turbidity of which is proporational to concentration of potassium.

SPECIMEN COLLECTION:
Freshly drawn non hemolysed serum is the specimen of choice.
Serum Potassium is stable for atleast 24 hours at room temperature and two weeks at 2-8°C. Serum or heparinised plasma, CSF & Urine. Urine diluted 1+1 with distilled water can be used for Potassium estimation.

REAGENT COMPOSITIONS :

R1 Standard	Potassium	5 mEq/l
R2 Color Reagent	Sodium tetraphenylboron	0.2mmol/L

PACKAGE: Collection and storage.
Store all reagents at +2-8ºC the reagents are stable until the expiration date as indicated on the label.

PRECAUTIONS & WARNING :
Avoid pipette with mouth.
The preparation, according to current regulation, is classified as not dangerous.
The total concentration of non active components (preservatives, detergents, stabilizers) is below the minimum required for citation.
Anyway handle with care, avoid ingestion, avoid contact with eyes, skin and mucous membranes. The samples must be handle as potentially infected from HIV or Hepatitis.

REAGENT PREPARATION & STABILITY :
Liquid reagents must be at room temperature (+2-8°C) before using. The remaining stability after opening the bottles is 1 month at (2 –8ºC)

REQUIRED MATERIALS NOT PROVIDED:
General Laboratory Equipment and instrumentations.

PROCEDURE:

Wavelength:	578nm
Optical path:	1 cm light path
Temperature:	+15-25 °C.
Reading:	Against reagent blank
Assay type:	End Point

Pipetting in tubes :

	BLANK	STANDARD	SAMPLE
Reagent (R2)	1ml	1ml	1ml
Distilled water	20 µL		
Standard		20 µL	
Sample			20 µL

Mix, incubate for **5** min at room temperature (+15-25°C.)
Read the absorbance of standard and sample tubes.
Volumes can be proportionally modified.
This methodology describes the manual procedure to use the kit.
For automated procedure, ask for specific application.

CALCULATION:

$$\text{Potassium mEq/l} = \frac{\text{(A) Sample}}{\text{(A) Standard}} \times 5.0$$

EXPECTED VALUE:

Serum:	3.6 - 5.5 mEq/l
Plasma:	4.0 – 4.8 mEq/l

The above mentioned values are to be considered as a reference. It is strongly recommended that each laboratory establish its own normal range according to its geographic area, according to IFCC protocol.

WASTE DISPOSAL:
The disposal of the product must be in accordance with local regulation concerning waste disposal.

QUALITY CONTROL:
It is recommended to execute the quality control at every kit utilization to verify that values are with in the reference range indicated by the methodology.

Sensitivity :

When run as recommended, the minimum detection limit of the assay 1.5 mEq/l.

Linearity :

The assay is linear up to Potassium 10 mEq/l

INTERFERENCE:

Turbid or Icteric serum produce falsely elevated results.

REFERENCES:

1- Tietz, N.W., Fundamentals of Clinical Chemistry,
W.B.Saunders Co., Phila, P.A.p.874.
2- Henry R.F., et, al, Clinical Chemistry Principles and Technics.
2nd Ed, Harper and Row, Harper
   and 3- Row, Hargersein, M.D.(1974).
4- Maruna RFL., Clin Chem. Acta. 2:581, (1958).
5- Trinder, P:Analyst, 76:596, (1951) .

📖	Consult Instruction for Use
⚠	Caution Consult Accompanying Documents
IVD	In Vitro Diagnostic Medical Device
🌡	Temperature Limitation
🏭	Manufacturer
EC REP	Authorized Representative In The European Community
REF	Catalogue Number
LOT	Batch Code
⧗	Use By

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