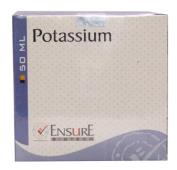
# **POTASSIUM**





# **PRINCIPLE**

Potassium is estimated in the serum by turbidometric method. Potassium ions in the serum reacts with Sodium tetra phenyl boron to produce insoluble precipitate of potassium tetra phenyl boron resulting in turbidity.

The extent of turbidity is directly proportional to the amount of potassium present and is measured at 620 nm photometrically

## **CLINICAL SIGNIFICANCE**

Potassium is the major intracellular cation. Potassium concentration in plasma determines neuromusciular and muscular irritability. Elevated or decreased concentartion impair the capabilities of muscle tissue to contract. An increase in serum Potassium may occur in renal failure, auria and severe oliguria. While decrease in serum Potassium is seen in starvation, vomiting, diarrhoea, malabsorption syndrom, etc.

# SAMPLE COLLECTION & STORAGE

Serum e altered and should be separated from the clot without delay to prevent any leakage of Potassium from RBC which contains 23 times higher concentrations

Lipemicl icteric/ Turbid Sample should be avoided

## **PRECAUTION**

- Potassium. Kit is for in Vitro diagnostic use only
- Bring all reagents to room temperature before use.
- > Add the serum drop by drop by with the microtip touching the top of the surface of the boron reagent solution. This facilitates for good mixing of the sample.

## KIT CONTENTS & STORAGE

Potassium (Boron) Reagent: 50 ml 25 x 1 ml 50 x 1 ml

Potassium standard (5 mmol) 2 ml 1 ml 1 ml

All reagents are to be stored at 2-8° C and stable till expiry date mentioned.

#### REAGENT PREPARATION

All reagents are ready to use

#### SYSTEM PARAMETERS

Reaction Type End point with Standard

Wave length 620 nm

Flow Cell Temp 30° C

Reagent Volume 1.0 ml

Sample Volume 50 pl

Standard Concentration 5

Units mmol/L

Incubation 5 minutes

Zero Setting Reagent Blank

#### **PROCEDURE**

Pipette in a clean dry test tubes labeled as standard(S) and Test(T)

	S	Т
Boron Reagent	1.0 ml	1.0 ml
Standard	50 μl	
Sample		50 μ1

Mix well and incubate for 5 minutes at RT and read the absorbance of Test (T) and standard (S) against distilled water on the spectrophotometer at 620 mm within 10 mins

## **CALCULATIONS**

Conc of Potassium in serum (mmol/L): ( Abs of test/Abs of Std) X Conc 0f Std

# **POTASSIUM**



# LIN EARITY

This method kit is linear upto 10 mmol/L. Samples exceeding 10 mmol/L should be diluted and reassyed. The result has to be multiplied by the dilution factor

# NORMAL RANGE

3.5 - 5.5 mmol/L

Due to variation in inter-laboratory assay conditions, instruments and demography, it is recommended that each laboratory should establish its own normal range.

## **BIBILOGRAPHY**

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