

PRINCIPLE

Potassium is estimated in the serum by turbidometric method. Potassium ions in the serum react 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 neuromuscular and muscular irritability. Elevated or decreased concentration impair the capabilities of muscle tissue to contract. An increase in Potassium may occur in renal failure, anuria and severe oliguria. While decrease in serum Potassium is seen in starvation, vomiting, diarrhoea, malabsorption syndrome etc.

SAMPLE COLLECTION & STORAGE

Serum is preferred and should be separated from the clot without delay to prevent any leakage of Potassium from RBC which contains 23 times higher Concentration. Otherwise, falsely elevated potassium concentration will be found. Do not use Plasma. Lipemic / Icteric sample should be avoided

PRECAUTION

Potassium reagent is for in vitro diagnostic use only. Bring all reagents to room temperature before use. Slowly transfer the serum in Boron reagent by dipping the micro pipette tips in the solution. Glassware should be washed with Nitric Acid and rinsed with high purity distilled water to avoid contamination due to detergents.

KIT CONTENTS & STORAGE	2x25	15 Tests
Potassium (Boron) reagent:	2	
Potassium standard (5 mmol/L)	1	1

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

REAGENT PREPARATION

All reagents are ready to use.

GENERAL INSTRUMENT PARAMETERS

Reaction Type	End point with standard
Wave length	620 nm (600-650)
Flow Cell Temp	30°C
Reagent volume	1.0 ml
Sample volume	25 µl
Standard concentration	5
Units	mmol/L
Incubation	5 minutes
Zero Setting	Distilled Water

PROCEDURE

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

	Standard	Test
Boron Reagent	1.0 ml	1.0 ml
Standard	25 µl	
Sample		25µl

Mix well and wait for 5 minutes at RT and read the absorbance of Test (T) and Standard (S) against distilled water on a spectrophotometer at 620 nm (600-650) within 10 mins.

CALCULATIONS

Potassium conc. (mmol/L)

$$= \frac{\text{Abs of test}}{\text{Abs of std.}} \times 5 \text{ mmol/L}$$

LINEARITY











Potassium kit is linear up to 7 mmol/L. Samples exceeding 7 mmol/L should be diluted and reassayed. The result has to be multiplied by the dilution factor.

EXPECTED VALUES

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.

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	Attention, see instructions for use		Consult Instructions For Use
	For in vitro diagnostic use only		Catalog #
	Store between 2-8°C		Lot Number
	Do not use if package is damaged		Date of Manufacturing
	Manufacturer		Use by