AGD

CliniPak

PHOSPHORUS

(UV Method)

Code	AGDSP - PH50
Pack Size	10 X 5 mL

INTENDED USE

This reagent kit is intended for in vitro quantitative determination of Phosphorus concentration in serum and urine.

CLINICAL SIGNIFICANCE

Phosphorous in blood exists in two forms as inorganic phosphate and organophosphate- esters mainly 2,3-diphosphoglyceric acid, ATP etc. The inorganic phosphate is of clinical interest. Serum in- organic phosphorus levels are closely tied to bone metabolism, renal functions, Vitamin D levels and parathyroid hormone status.

PRINCIPLE

Inorganic phosphate reacts with molybdate to form a heterpolyacid complex.The sulfuric acid eliminates the need to prepare a protein free filtrate. The absorbance at 340nm is directly proportional to the inorganic phosphorus level in the sample.

H_2SO_4

Phosphate + Ammonium Molybdate $\longrightarrow$ Heteropolyacid - Phosphomolybdic Complex

PROCEDURE

Reagent + Sample + Incubation → Measurement
(300µL) (3 µL) (300sec) (340nm)

REAGENT COMPOSITION

Ammonium Molybdate	≈0.3mmol/L
Sulphuric Acid	≈ 1.0%

REAGENT STORAGE AND STABILITY

Phosphorous reagent is a single reagent system ready to use.The reagent is stable till the expiry date stated on the reagent bottle label when stored at 2-8°C protected from light.

SAMPLES

Collect sample using standard sampling tube. Preferably use serum free of hemolysis

BASIC PARAMETERS

SHORT NAME	Phosphorous
NAME	Phosphorous
METHOD	UV Method
ASSAY	End point (two point reagent blank)
MAIN WAVE	340nm
SUB WAVE	0
DECIMAL	2
UNIT	mg/dl
R1 VOLUME	300µL
INCUBATION	36 secs
R2 VOLUME	0µL
SAMPLE VOLUME	3µL
INCUBATION	0
MIXING SPEED	1
REACTIONTIME(Delay)	260 secs
CHECK TIME (Read)	40 secs
LINEAR RANGE	0 -10mg/dL
ABSORBANCE RANGE	0-2.5
DISCREPANCY	0
CALIBRATION TYPE	SINGLE SPOT LINEARITY
DILUTION RATIO	6
SAMPLE VOLUME	50

*Enter calibration value as per the lot of the calibrator and method.

LINEARITY

Reagent is Linear up to 10mg/dL.Dilute the sample appropriately and re-assay if Phosphorus concentration exceeds 10 mg/dL.Multiply result with dilution factor.

REFERENCE NORMAL VALUE

Serum : Children : 4.0 -5.5 mg/dL
Adults : 3.0 - 4.5 mg/dL
Urine : 0.40 - 1.3 gm/24 hrs
It is recommended that each laboratory should establish its own expected range

QUALITY CONTROL

To ensure adequate quality control,it is recommended that the laboratory should use a normal and abnormal commercial reference control serum.The quality control material is used to check the function of reagents and the machine together.

LIMITATIONS & PRECAUTIONS

- Storage conditions as mentioned on the kit to be adhered.
- Do not freeze or expose there agents to higher temperature as it may affect the performance of the kit.
- Before the assay bring all the reagents to room temperature.
- Avoid contamination of the reagent during assay process.
- Use clean glassware free from dust and debris.
- Reagent to sample ratio as mentioned above must be strictly adhered, as any change to it affects the factor.
- In case reagent comes in contact with eyes,immediately rinse with plenty of water and seek medical advice.

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EU REP

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