INORGANIC PHOSPHORUS

Colorimetric determination of inorganic phosphorus in biological liquids

TEST SUMMARY

Phosphorus reacts with Ammonium molibdate forming a compound that absorbs ultra-violet light.

SAMPLES

Serum, plasma immediately separated from cells. Diluted urine 1:25 with distilled water.
Stability: 7 days at 4°C.

REAGENTS

Sole reagent	Ammonium Molibdate 0.8 M; Sulphuric Acid 0.6 M; surfactants, stabilizers.
Standard	Inorganic phosphorus 4 mg/dl; stabilizers and conservatives.

MATERIAL REQUIRED BUT NOT SUPPLIED

Normal laboratory equipment. Spectrophotometer UV/VIS with thermostatation. Automatic Micropipette. Cuvette in optical glass or monouse in optical polystyrene. Physiologic solution.

PRECAUTIONS

Reagent may contain not reactive and conservative components. It is opportune to avoid contacts with the skin and do not swallow.
Perform the test according to the general "Good Laboratory Practice" (GLP) guidelines.

REAGENTS PREPARATION

Reagents are ready to use, stable until expiration date on label, stored at 4-30°C.

PROCEDURE

Kind of analysis:	End Point
Reading time:	2 minutes
Wavelength:	340 nm (334-365)
Temperature:	R.T.
Lightpath:	1 cm
Zero:	Blank Reagent
Colour stability:	120 minutes

Reagents	Blank	Standard	Sample
Distilled water	10 µl	--	--
Standard	--	10 µl	--
Sample	--	--	10 µl
Sole Reagent	1000 µl	1000 µl	1000 µl

CALCULATION

SERUM/PLASMA

Phosphorus (mg/dl) (A sample/A standard) x 4

Phosphorus (mM) (A sample /A standard) x 1.28

Phosphorus (mEq/l) (A sample /A standard) x 2.32

URINE (g/24h)

(A sample /A standard) x l of urine

EXPECTED VALUES

	ADULTS	CHILDREN
Serum Plasma	2.8 - 4.6 mg/dl 0.9 - 1.5 mM 1.6 - 2.7 mEq/l	4 - 6.5 mg/dl 1.3 - 2.1 mM 2.3 - 3.8 mEq/l
Urine	0.5 - 1.1 g/24h	

Every laboratory should establish own reference intervals in accordance with own population.

NOTES

- If the results are incompatible with clinical presentation, they have to be evaluated within a total clinical study.
- Only for IVD use.

CALIBRATION/QUALITY CONTROL

It is suggested to perform an internal quality control. For this purpose the following control sera on human base are available on request:

QN 0050 CH **10 x 5 ml**
Control Sera normal values

QP 0050 CH **10 x 5 ml**
Control Sera pathological values

TEST PERFORMANCE

Precision

Intra-assay (n = 20)	Mean (mg/dl)	SD (mg/dl)	CV%
Sample 1	3.2	0.032	1.01
Sample 2	4.3	0.032	0.75

Inter-assay (n = 20)	Mean (mg/dl)	SD (mg/dl)	CV%
Sample 1	3.21	0.044	1.39
Sample 2	4.305	0.039	0.92

Linearity
The method is linear up to 20 mg/dl.

Methods comparison
A comparison with a commercial available product gave the following results in a comparison on 50 samples:

Phosphorus LTA = x
Phosphorus competitor = y
n = 50

y = 0,99453x + 0,01144 r = 0,9978

WASTE DISPOSAL

Product is intended for professional laboratories. Waste products must be handled as per relevant security cards and local regulations.

PACKAGING

CODE CC01700	**(600 TESTS)**	
Sole Reagent	6 x 100 ml	(liquid)
Standard	1 x 5 ml	(liquid)

REFERENCES

Amodard – Clin. Chem. 18; 601 (1972).

MANUFACTURER

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SYMBOLS

IVD	Only for IVD use
LOT	Lot of manufacturing
REF	Code number
	Storage temperature interval
	Expiration date
	Warning, read enclosed documents
	Read the directions
	Biological risk

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