Pacific Biomarkers
The Value of Expertise

Phosphorus, Inorganic

Analyte: Phosphorus, Inorganic

Specimen Type: For information on this assay, please contact PBI.

Biological or Clinical Significance:

88% of the phosphorous contained in the body is localized in bone in the form of calcium phosphate as the apatite Ca2+ [Ca3 (PO4) 2] 2-3. The remainder is involved in intermediary carbohydrate metabolism and in physiologically important substances such as phospholipids, nucleic acids and ATP. Phosphorus occurs in blood in the form of inorganic phosphate and in organically bound phosphoric acid. The small amount of extracellular organic phosphorus is found almost exclusively in the form of phospholipids.

The ratio of phosphate to calcium in the blood is approximately 6:10. An increase in the level of phosphorus causes a decrease in the calcium level. The mechanism is influenced by interactions between parathormone and vitamin D. Hypoparathyroidism, vitamin D intoxication and renal failure with decreased glomerular phosphate filtration give rise to hyperphosphatemia. Hypophosphatemia occurs in rickets, hyperpara-thyroidism and Fanconi's syndrome.

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