**QUANTITATIVE DETERMINATION OF ALKALINE PHOSPHATASE IVD**

**ORDER INFORMATION**

<table>
<thead>
<tr>
<th>REF: ALPM 25</th>
<th>Cont.</th>
<th>25x1 ml</th>
<th>ALPM 50</th>
<th>Cont.</th>
<th>50x1 ml</th>
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**CLINICAL SIGNIFICANCE**

Alkaline phosphatase is a hydrolytic enzyme found in serum in numerous distinct forms which originate mainly from bone and liver. Physiological increases are found during bone growth in childhood and in pregnancy, while pathological increases are largely associated with hepatobiliary and bone diseases. Elevated activities are also observed in infectious hepatitis, bone disease, osteomalacia (rickets), bone metastases and hyperparathyroidism.

**PRINCIPLE**

p-Nitrophenyl phosphate is converted to p-nitrophenol and phosphate by alkaline phosphatase. The increase of absorption at 405 nm is proportional to the alkaline phosphatase concentration in the sample.

**REAGENT COMPOSITION**

Reagent II : Substrate reagent

**SAFETY PRECAUTIONS AND WARNINGS**

1. For in vitro diagnostic use only.
2. DO NOT pipette by mouth. Avoid contact with skin and eyes. If spill, thoroughly wash affected area with water. For further information, consult the SDI Alkaline Phosphatase Reagent Material Safety Data Sheet.
3. Reagent contains Sodium Azide as a preservative. In a dry state may react with copper or lead plumbing to form explosive metal azides. Upon disposal, flush with large amounts of water to prevent azide build up.
4. Do not use the reagent after the expiration date printed on the kit.

**SAMPLE COLLECTION AND PRESERVATION**

Serum or plasma.

**REAGENT PREPARATION AND STORAGE**

Reagent is ready to use.

**REAGENT STABILITY**

The working reagent is stable at 2 - 8°C. till expiry dated. (Store away from direct sunlight).

**LINEARITY**

The method is linear to a concentration of 2000 U/l

**AUTOMATED PARAMETERS**

- **Wavelength**: 405 nm
- **Cuvette**: 1 cm light path
- **Reaction Temperature**: 37°C
- **Measurement**: Against distilled w
- **Reaction Type**: Kinetic test
- **Reaction Direction**: Increasing
- **Sample/Reagent Ratio**: 1:50
- **Delay/Lag/time**: 60 Secs
- **Interval time**: 30 Secs
- **No. of Readings**: 04
- **Blank Absorbance limit**: < 1.0
- **Factor**: 2720
- **Low Normal at 37°C**: 25 U/l
- **Alkaline Phosphatase**: 147 U/l
- **Linearity at 37°C**: 2000 U/l

**ASSAY PROCEDURE**

**PIPETTE INTO TEST TUBES**

- **SAMPLE**: 20 μl
- **REAGENT**: 1000 μl

Mix well and Incubate at 37°C for 60 secs. Measure absorbance increase every 30 secs for 2 minutes and determine the Δ A/min.

**CALCULATION**

\[ \text{A/min.} \times 2720 = \text{U/l Alkaline Phosphatase} \]

**QUALITY CONTROL**

Accutestrol N - H

**REFERENCE INTERVAL**

<table>
<thead>
<tr>
<th>ADULTS</th>
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<tr>
<td>37°C</td>
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<td>25-147 U/l</td>
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The reference values are to be considered as indicative only. Every Laboratory should establish own normal ranges.

**BIBLIOGRAPHY**

Fundamental of Clinical Chemistry, Young D.S, Tietz, N.