Biomaghreb

6, Rue Ibn Ennafis - Z.I. Lac 3 Tunisie
Tél. : 71 182 500 - Fax : 71 182 250
www.biomaghreb.com

CE

ALKALIN PHOSPHATASE

ALP (DGKG)

Kinetic determination of
alkalin phosphatase activity (EC 3.1.3.1)

IN VITRO DIAGNOSTIC USE

IVD

REF	**13019**	**20 x 3 ml (60 T)**	**R1:** 20 x 3 ml	**R2:** 1 x 7 ml
REF	**13026**	**10 x 10 ml (100 T)**	**R1:** 10 x 10 ml	**R2:** 1 x 11 ml
REF	**13033**	**4 x 50 ml (200 T)**	**R1:** 4 x 50 ml	**R2:** 2 x 11 ml
REF	**13040**	**10 x 3 ml (30 T)**	**R1:** 10 x 3 ml	**R2:** 1 x 3,5 ml

CLINICAL SIGNIFICANCE

Alkalin phosphatases (ALPs) are enzymes found in most body tissues, particularly in bone, liver, intestine, kidney, and placenta. Approximately 80% of circulating PAL activity comes from liver and bone isoforms. The PAL activity assay is often prescribed in cases of suspected liver or bone disease. An increase in PAL activity is seen in cholestasis or biliary obstruction, or in bone diseases such as rickets, Paget's disease, osteomalacia, and bone metastases.

PRINCIPLE

This is the kinetic determination of alkalin phosphatase activity (PAL) according to the method recommended by the German Society for Clinical Chemistry (DGKG).
In an alkalin medium, alkalin phosphatases catalyze the hydrolysis of Nitrophenylphosphate to Nitrophenol and Phosphate.
The kinetic of nitrophenol's formation is proportional to the PAL activity in the sample.

REAGENT COMPOSITION

Reagent 1 Buffer	Buffer diethanolamine pH 9,8 Magnésium chloride	1 mmol/l 0,5 mmol/l
Reagent 2 Substrate	Nitrophenylphosphate	10 mmol/l

SAFETY CAUTIONS

Biomaghreb reagents are intended for use by qualified personnel for in vitro use (do not pipette by mouth).

- Refer to the current SDS available on request or at www.biomaghreb.com;
- Verify the integrity of the reagents before use; and
- Disposal of waste: comply with the legislation in force.

For safety reasons, treat any specimen or reagent of biological origin as potentially infectious.
Respect the legislation in force.

REAGENT PREPARATION

Working solution:
Take the bottle R1 with the necessary quantity of R2, listed below:

REF 13019 and REF 13040 : R1..... 3 ml
R2.....0,3 ml
REF 13026 : R1.....10 ml
R2.....1 ml
REF 13033 : R1.....50 ml
R2.....5 ml

SAMPLE COLLECTION AND HANDLING

Heparinized serum or plasma without hemolysis.

PRESERVATION AND STABILITY

Stored in the original, tightly stoppered bottle at 2-8°C, the reagents are stable if used and stored under the recommended conditions:

- Before opening: Until the expiry date indicated on the label of the box at 2-8°C;
- After opening : (Working Solution):
  5 days at 15 -25°C;
  15 days at 2-8°C.

ADDITIONAL EQUIPMENT

- Basic equipment of the medical analysis laboratory ;
- Spectrophotometer or Clinical Biochemistry Analyzer.

QUALITY CONTROL

External quality control program.

It is recommended to control in the following cases:

- At least one test per series.
- Change of reagent bottle.
- After maintenance work on the analyzer.

If a control value is outside the confidence limits, repeat the procedure using the same control.

Use normal and pathological control sera.

LINEARITY

If the ΔO.D./min > 0.250 repeat the test by diluting the sample 1/5 in a 9g/l NaCl solution and multiply the result by 5.

PROCEDURE

Wavelength: 405 nm;

Temperature: 25- 30 or- 37°C;

Tank: 1 cm thick;

Adjust the spectrophotometer zero to air or distilled water.

Working solution	1 ml
Incubate at 25 - 30 or 37°C	
Sample	20 µl
Mix and introduce into a thermostatically controlled tank. Wait 1 minute and then measure the average increase in optical density per minute for 1 to 3 minutes.	

Note: Measurement of enzyme activity is better within four hours of sampling.

CALCULATION

At 405 nm .....PAL (UI/L) = ΔD.O/min x 2750;

At 410 nm .....PAL (UI/L) = ΔD.O/min x 2910.

REFERENCE VALUES

	25°C	30°C	37°C
Children	400 UI/l	500 UI/l	650 UI/l
Adults	40 -190 UI/l	50 - 230 UI/l	70 - 300 UI/l

REFERENCES

Haussamen T.U. et al. Clin. Chim. Acta. 35, 271-273 (1977).

Manufacturer | Use by | In Vitro Diagnostic | Temperature Limitation | Catalogue number | See insert | Store away from light | Sufficient for < n > essais | Batch number