

IN VITRO DIAGNOSTIC USE



REF	11015	20 x 3 ml (60 T)	R1: 1 x 65 ml	R2: 20 Lyophilisates
REF	11022	10 x 10 ml (100 T)	R1: 1 x 110 ml	R2: 10 Lyophilisates
REF	11039	10 x 3 ml (30 T)	R1: 1 x 35 ml	R2: 10 Lyophilisates
REF	11046	2 x 110 ml (220 T)	R1: 2 x 110ml	R2: 2 Lyophilisates

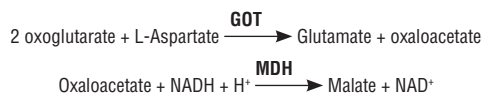
CLINICAL SIGNIFICANCE

ALAT (alanine amino-transferase) formerly known as Glutamic Pyruvic Transaminase (GPT) is an enzyme found mainly in liver cells, and to a lesser extent in kidney, heart, and muscle cells. The measurement of ALAT activity allows the detection of liver damage. When the liver is damaged, ALAT is released into the bloodstream in patients with cirrhosis, hepatitis, cancer and jaundice due to biliary congestion). In general, ALAT activity values are compared with the activities of other enzymes such as alkaline phosphatase (PAL), aspartate aminotransferase (ASAT) and bilirubin to accurately define the origin of liver damage.

PRINCIPLE

The kinetic determination of ALAT activity is based on the method developed by Wroblewski and Ladue, and optimized by Henry and Bergmeyer.

The reaction is initiated by adding the sample to the reagent according to the following reaction scheme:



The rate of decrease in NADH concentration is directly proportional to the alanine amino transferase activity in the sample.

LDH : Lactate Dehydrogenase

REAGENT COMPOSITION

Reagent 1 Buffer	Buffer Tris pH 7.5 à 30°C Alanine	100 mmol/l 500 mmol/l
Reagent 2 Substrate	NADH LDH Oxoglutarate	0.18 mmol/l 1200 U/l 15 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 MSDS available on request or on www.biomaghreb.com.
- Check the integrity of the reagents before use.
- Disposal of waste: comply with applicable legislation.

For safety reasons, treat any specimen or reagent of biological origin as potentially infectious. Observe the applicable legislation.

REAGENT PREPARATION

Working solution:

Mix the substrate with 3 ml **REF** (11015) and **REF** (11039) or 10 ml **REF** (11022) of Buffer R1.

For **REF** (11046) reconstitute each R2 with one vial R1.

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 +4°C;
- **After opening:** (Working Solution):
24 hours at 20-25°C;
7 days at 2-8°C.

ADDITIONAL EQUIPMENT

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

LIMITS

Hemolysis can interfere.

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 $\Delta DO/\text{min}$ at 340 nm is greater than 0.15, repeat the test by diluting the sample 1:10 with a 9 g/l NaCl solution.

Multiply the result by 10.

PROCEDURE

Wavelength: 340 nm;

Temperature: 25 - 30 or 37 ° C;

Tank: 1 cm thick;

Adjust the spectrophotometer zero to air or distilled water.

Working solution	1 ml	3 ml
Pre-incubate at the selected temperature (25, 30 or 37°C).		
Sample	100 µl	300 µl
Mix and incubate 1 minute. Measure the decrease in optical density per minute for 1 to 3 minutes.		

CALCULATION

At wavelength 340 nm,

$\Delta DO / \text{min} \times 1750 = \text{IU/l}$

REFERENCE VALUES

	25°C	30°C	37°C
Women	Up to 16 UI/l	Up to 22 UI/l	Up to 31 UI/l
Men	Up to 22UI/l	Up to 29 UI/l	Up to 40UI/l

REFERENCES

- Bergmeyer H. Schaibe and Walefeld. Clin. Chem. 24 58 - 73 (1978);
Bergmeyer and Horder Clin. Chem. Acta 105 147 F (1980) ;
Henry R, J, et al., Am J clin Path (1960), 34, 381-398.



Manufacturer



Use by



In Vitro Diagnostic



Temperature
Limitation



Catalogue number



See insert



Store away from light



Sufficient
for < n > essais



Batch number