

PRODUCT CODE

CZ008

INTENDED USE

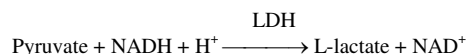
This reagent is intended for in vitro quantitative determination of Lactate dehydrogenase (LDH) in serum or plasma.

CLINICAL SIGNIFICANCE

Lactate dehydrogenase (LDH) is an enzyme with wide tissue distribution in the body. The higher concentrations of LDH are found in liver, heart, kidney, skeletal muscle and erythrocytes. Increased levels of the enzyme are found in serum in liver disease, myocardial infarction, renal disease, muscular dystrophy and anemia. Clinical diagnosis should not be made on a single test result; it should integrate clinical and other laboratory data.

PRINCIPLE

Lactate dehydrogenase (LDH) catalyses the reduction of pyruvate by NADH, according the following reaction:



REAGENT COMPOSITION

REAGENT 1 (BUFFER REAGENT)

Tris buffer 80 mmol/L
 Pyruvate 1.6 mmol/L
 Sodium Chloride 200 mmol/L

REAGENT 2 (SUBSTRATE)

NADH 0.15 mmol/L

REAGENT PREPARATION

SUBSTRATE START

R1 and R2 are ready-to-use and stable upto the expiry date if contamination is avoided and stored at 2-8°C and protect from light.

SAMPLE START

Mix 4 parts of R1 + 1 Part of R2 = Mono reagent
 Stability of mono reagent: 5 days at 2-8°C, 8 hours at 15-25°C.

SPECIMEN

Serum, Heparinized or EDTA plasma avoid hemolysis; Loss of activity within 3 days at (2-8)°C = 8% and at (15-25)°C = 20%

PRECAUTION

- The reagents contain sodium azide as preservative. Do not swallow and avoid contact with skin and mucous membranes.
- To avoid contamination, use clean laboratory wares. Avoid direct exposure of reagent to light.

ASSAY

Wavelength : 340 nm, Hg 365 nm, Hg 334 nm
 Cuvette : 1 cm light path
 Temperature : 25°C/ 30°C/37°C

Adjust the instrument to zero with distilled water or air

PROCEDURE

SUBSTRATE START

Temperature-->	25°C or 30°C	37°C
Reagent 1 Buffer	1000 µL	1000 µL
Sample	20 µL	10 µL
Mix incubates for approx... 1 min, then add,		
Reagent 2 Substrates	250 µL	250 µL

SAMPLE START

Mono reagent (R1+R2)	1000 µL	1000 µL
Sample	20 µL	10 µL

READING FOR BOTH

Mix and read absorbance after 1 min and start stop watch.
 Read absorbance again after 1, 2 and 3 min.

CALCULATION

Multiply factor from table below with ΔA/min,

Substrate start	25°C / 30°C	37°C
340 nm	10080	20000
334 nm	10275	20390
365 nm	18675	37060
Sample start	25°C / 30°C	37°C
340 nm	8095	16030
334 nm	8250	16345
365 nm	15000	29705

LINEARITY

If activities exceed 1200 U/L. Dilute 50 ul of sample with 500 ul of 0.9% NaCl and multiply the result by 11.

NORMAL RANGE

Temperature	25°C	30°C	37°C
Adults	120-240 U/L	160-320 U/L	225-450 U/L

Each laboratory should establish reference ranges for its own patients' population.















QUALITY CONTROL

All control sera with values determined by this method can be used.

NOTE

The reagent contains sodium azide, handle with care and wash thoroughly with water if it comes in contact with the skin.

SYMBOL ON LABELS

Symbols	Signify	Symbols	Signify
	Catalogue Number		Pack Size
	Expiry Date		Volume
	Storage Condition		Lot Number
	Instruction for Use		In Vitro Diagnostics
	Manufacturing Date		Manufacturer
	Number of Tests		For Single Use Only
	EC Representative		European conformity

BIBLIOGRAPHY

- Z. Klin. chem. Klin Biochem. 8,658 (1970), 1, 1820(1972).
- Wei Bhaar, D., et al Med. Welt 26,387 (1975)

