

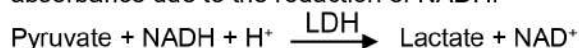
Reagent kit for quantitative estimation of Lactate Dehydrogenase (LDH) activity in Serum or Plasma.

DIAGNOSTIC SIGNIFICANCE:

Lactate dehydrogenase is a cytoplasmic enzyme distributed very widely in the body. It is found in organs like heart, liver, kidney and skeletal muscle. Elevated LDH levels in serum are observed in several hemolytic, neoplastic, cardiac, skeletal muscle and renal diseases. These may also be found in destructive renal disease, progressive muscular dystrophy, megaloblastic anaemia, liver cirrhosis, hepatitis, hepatic metastasis, hepatoma and pulmonary embolism.

PRINCIPLE:

LDH catalyzes the oxidation of pyruvate to lactate accompanied by the simultaneous reduction of NADH to NAD. LDH activity in serum is proportional to the decrease in absorbance due to the reduction of NADH.



SPECIMEN COLLECTION:

Fresh, clear, serum with no hemolysis is essential. However the plasma collected with heparin or EDTA as an anticoagulant.

KIT PRESENTATION:

Pack Size	1 X 25 ml	2 X 25 ml
R1 - LDH (Coenzyme Reagent)	1 X 20 ml	2 X 20 ml
R2 - LDH (Substrate Reagent)	1 X 05 ml	2 X 05 ml

WORKING REAGENT PREPARATION:

Mixing 4 volumes of R1-LDH (Coenzyme Reagent) with 1 volume of R2-LDH (Substrate Reagent).
i.e. 800 µl R1 + 200 µl R2.

REAGENT STORAGE AND STABILITY:

All reagents are stable at 2-8°C until the expiry date stated on the label.

ASSAY PARAMETERS:

Reaction	: Kinetic	Sample Volume	: 20 µl
Wavelength	: 340 nm	R1 + R2 Volume	: 800 µl + 200 µl
Flow Cell Temp.	: 37 °C	Factor	: 8095
Initial Delay	: 60 Sec	Rea. Slope	: Decreasing
Interval Time	: 30 Sec	Zero Setting	: Dist. Water
Read Time	: 90 Sec	Linearity	: 2000
No. of Reading	: 03	Unit	: IU/L

PROCEDURE:

Addition Sequence	Test
R1 - LDH (Coenzyme Reagent)	800 µl
R2 - LDH (Substrate Reagent)	200 µl
Sample (Test)	20 µl

Mix immediately and read **first** absorbance of test exactly at 60 seconds and then, **second, third and fourth** at an interval of 30 seconds at 340nm. Determine the mean change in absorbance per minute (ΔA/min) and calculate the test results.

CALCULATION:

LDH Activity (IU/L) = ΔA/min X Factor

NORMAL VALUES:

235 – 470 IU/L at 37°C

Children < 12 years old have LDH levels 10-15% higher than adults ones.

Each laboratory should establish its own reference range.

LINEARITY:

This method is linear up to **2000 IU/L**. For values above 2000 IU/L, dilute the sample suitably with 0.9 % saline, and repeat the assay. Apply correction due to dilution to arrive at a final result.

REFERENCES:

1. Tietz, N.W., Clinical guide to laboratory tests, 3rd Ed., (W.B.Saunders eds. Philadelphia USA), (1995), 76.
2. Vassault A., et al., *Protocole de validation de techniques, (Document B, stade 3)*. Ann. Biol. Clin., (1986), **44**, 686.
3. Thomas L. Clinical laboratory diagnostics. 1st ed. Frankfurt: TH-Books Verlagsgesellschaft; 1998. p.89-94.

IFU No.: 032/00 Rev. No.: 00/120723



Expiry Date



In-Vitro Diagnostics Use



Storage



Mfg. Date



Batch Number



Catalogue Number



See Package Insert