ESTROM LDH (P-L)
(SCE Method)

ANGSTROM BIOTECH PVT. LTD

This reagent kit is for quantitative estimation of Lactate Dehydrogenase activity in serum.

PRINCIPLE:
The substrate pyruvate is reduced to lactate by the action of lactate dehydrogenase present in the sample using NADH as a donor. By the conversion of NADH to NAD there is decrease in absorbance at 340 nm that corresponds to LDH activity.

$$\text{PYRUVATE} + \text{NADH} \xrightarrow{\text{LDH}} \text{LACTATE} + H^{+} + \text{NAD}$$

CLINICAL SIGNIFICANCE:
Increased LDH level seen in several hemolytic, neoplastic, cardiac, skeletal muscle and renal diseases. In acute myocardial infarction, elevated level of LDH observed that reaches peak in 48-72 hours. LDH in one of the cardiac panel enzymes that includes CK (CPK), CK-MB, GOT (AST), LDH and HBDH.

SPECIMEN COLLECTION AND STORAGE:
- Fresh, clear, unhemolysed serum is essential.
- Samples can be preserved at 2-8° C for 3 days.

PRECAUTION:
- Estrom LDH reagent is for In Vitro diagnostic use only.

REAGENTS:
All the reagents are to be stored at 2-8° C

	No. of Bottles
	5 x 10 ml
Reagent 1 (Substrate)	4
Reagent 2 (Coenzyme)	1

REAGENT RECONSTITUTION;
- 5 x 10 ml: Mix 4 ml of reagent 1 (substrate) to 1 ml of Reagent 2 (coenzyme). Mix gently, label as working reagent

OR

- Prepare the working reagent as per the needs of the laboratory in the following proportion.

Reagent 1	0.4 ml
Reagent 2	0.1 ml
	0.5 ml

REAGENT STORAGE & STABILITY:
All the reagents are stable up to expiry date indicated on the bottle label when stored at 2-8°C.Working reagent is stable at 2-8°C for 7 days.

GENERAL INSTRUMENT PARAMETERS:

Reaction Type	: Kinetic
Slope of Reaction	: Decreasing
Wavelength	: 340 nm
Flowcell Temperature	: 37° C
Reagent Volume	: 1.0 ml
Sample Volume	: 30 µl (0.03ml)
Delay Time	: 60 seconds
Interval	: 30 seconds
No. of readings	: 3
Factor	: 5520
Units	: IU/L
Zero Setting	: Distilled water

PROCEDURE:
Allow the sample and reagent to attain room temperature prior to use

Dispense into test tube	Test
Working Reagent	1.0 ml
Sample	30µl

Mix and aspirate. Read absorbance after a delay of 60 seconds at an interval of 30 seconds i.e, at 60 90 and 120 seconds at 340 nm. Obtain the mean change in absorbance per minute (ΔA/min)

LINEARITY:
This method is linear for LDH activity up to 1000 IU/L. For sample values exceeding the linearity limit, dilute the sample suitably with normal saline and repeat the assay. Apply proper dilution factor while calculation.

CALCULATIONS:
LDH activity = ΔA/min x factor
Factor = 5520

REFERENCE VALUE:
Normal value : 90-460 IU/L at 37° C

It is recommended that each laboratory establish its own reference values.

BIBLIOGRAPHY:

- WEIBHAAR,D. et. al, Med. Welt 26 (1975) 387.
- BUHL. S.N. AND JACKSON, N.Y., Optimal conditions for assaying human lactate dehydrogenase, pyruvate to lactate at 25°, 30° and 37° C, Clin. Chem. 24, 261-266 (1975).

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⚠	Attention,see instructions for use		Consult Instructions For Use
IVD	For in vitro diagnostic use only	REF	Catalog #
2°C 8°C	Store between 2-8°C	LOT	Lot Number
	Do not use if package is damaged		Date of Manufacturing
	Manufacturer		Use by