

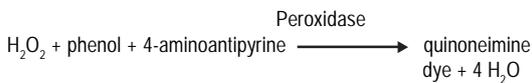
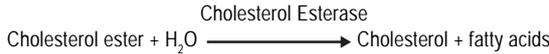
Lifechem™ DIRECT HDL CHOLESTEROL

CLINICAL SIGNIFICANCE

High density Lipoproteins(HDL) are responsible for the reverse transport of Cholesterol from the peripheral cells to the liver. HDL one of the major classes of plasma lipoproteins. Cholesterol is transformed to bile acids in liver which are excreted into the intestine via the biliary track.

Monitoring of HDL-Cholesterol in serum is of clinical importance since an inverse correlation exists between serum HDL-Cholesterol concentrations and the risk of atherosclerotic disease. Elevated HDL-Cholesterol concentrations are protective against coronary heart disease, while reduced HDL-Cholesterol concentrations, particularly in conjunction with elevated triglycerides, increase the cardio-vascular risk.

TEST PRINCIPLE



In the first step LDL, VLDL and Chylomicrons are eliminated and transformed to non-reaction compounds under specific condition for the reaction. The HDL-Cholesterol is subject to color reaction, by the second reagent.

NORMAL RANGE

Men (mg/dl) : >55 (no risk), 35-55 (moderate risk), <35 (high risk)

Women (mg/dl) : >65 (no risk), 45-65 (moderate risk), <45 (high risk)

It is recommended that laboratories should establish their own normal range.

KIT CONTENTS

	Code No.
	KHDL2
	50T
Reagent 1. Buffer solution	3x10ml
Reagent 2. Enzyme reagent	10ml
Reagent 3. Calibrator	1 vial

SPECIMEN

Unhemolysed serum or plasma.

WORKING REAGENT PREPARATION

The reagents are ready-to-use. All the reagents are to be stored at 2-8°C and are stable till the expiry date mentioned on the labels.

PROCEDURE

Pipette into test tubes as follows:

	B	S	T
Calibrator	-	6 µl	-
Specimen	-	-	6 µl
Buffer solution (1)	600 µl	600 µl	600 µl
Mixwell and Incubate at 37°C for 5 minutes			
Enzyme reagent (2)	200 µl	200 µl	200 µl

Read the initial absorbance A_1 after exactly 30 sec., and A_2 after 5 minutes at 620nm (600-630) for calibrator and specimen respectively.

CALCULATIONS

Calculate $\Delta A = A_2 - A_1$

$$\frac{\Delta A \text{ sample}}{\Delta A \text{ calibrator}} \times \text{Calibrator Conc.} = \text{HDL Chol. Conc. (mg / dl)}$$

QUALITY CONTROL

It is recommended to include Assayed Quality Control Serum (Level 1 & II) with each assay batch to verify the performance of the procedure. Failure to obtain the proper range of values in the assay of control sera may indicate either reagent deterioration, instrument malfunction or procedural errors.

SYSTEM PARAMETERS

Mode	:	Fixed Time Kinetic
Wave length	:	620nm (600-630)
Delay time	:	30 seconds
Measuring time	:	300 seconds
Flow Cell Temp	:	37°C
Reagent volume	:	R1:600 µl, R2: 200 µl
Sample volume	:	6µl
Low normal	:	55
High normal	:	35
Calb. Conc.	:	Refer calibrator Literature
Units	:	mg / dl
Blank	:	Reagent

NOTES

1. Lipeamia (Intralipid): No significant interference of triglycerides upto 1000 mg / dl). There is poor correlation between turbidity and triglycerides concentration.
2. In rare cases, elevated immunoglobulin concentrations can lead to falsely increased HDL-Cholesterol results.
3. Abnormal liver function does affect lipid metabolism; consequently, HDL and LDL results are of limited diagnostic value.
4. Cholesterol is affected by a number of factors, e.g. smoking, exercise, hormones, sex and age)

LINEARITY

Linearity of the kit is upto 180 mg/dl.

BIBLIOGRAPHY

1. Burstein, M. *et al.*, (1970), 11:583-595
2. Cohn, J.S. *et al.*, (1988), Clin. Chem., 34:2456-2459.
3. Glick, M.R. *et al.*, (1986), Clin. Chem., 32:470-474.



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