Cholesterol

Liquid Reagent
Enzymatic & colorimetric method
Store at 2-8ºC

PRINCIPLE

Cholesterol is measured by the use of the following enzymatic reaction:

Cholesterol ester + H_2O —(Cholesterol Esterase)→ Cholesterol + Fatty acids

Cholesterol + O_2 —(Cholesterol Oxydase)→ 4 Cholesten -3- one + H_2O_2

2 H_2O_2 + 4 amino antypirine —(Peroxydase)→ Red quinone + 4 H_2O

REFERENCE VALUES

Serum or plasma	130-200 mg/dl

These ranges are given for orientation, each laboratory should establish its own normal ranges.

SAMPLES

Serum or plasma collected on heparin or EDTA .
Cholesterol in serum stable for 7 days at 2-8ºC.

REAGENTS

R_1:

4-Aminophenazone	0.7 mmol/l
Peroxydase	3000 UL /ml
Cholesterol esterase	300 UL/ml
Cholesterol oxydase	300 UL/ml
Phenol	16 mmol/l
Phosphate buffer	100 mmol/l

R_2

Standard	200 mg/dl

WORKING REAGENT

The reagent is ready to use
If the absorbance of the working reagent is higher than 0.13 at 492 nm the reagent can not be use

PROCEDURE

Bring the working reagents to room temperature

Wavelength	500 nm (492-550 nm)
Temperature	25ºC/37ºC/37ºC
Cuvette	1 cm light path
Method	Endpoint - increasing

	Blank	Standard	Sample
Standard		10 µl	
Sample			10 µl
Working solution	1 ml	1 ml	1 ml

Mix, incubate 20 minutes at 25ºC or for 12 minutes at 30ºC or for10 minutes at 37 ºC.
Measure the optical density of standard and sample against blank reagent.
The color intensity is stable for 30 minutes.

CALCULATION

Cholesterol (mg/dl) =

$$\frac{\text{O.D sample}}{\text{O.D standard}} \times \text{standard concentration}$$

mg/dl X 0.0259 = mmol/L

LINEARITY

Up to 600 mg/dl.

SPECIFICATION

Bilirubin 0.5g/l, lipid 4.5g/l, glucose 10g/l and ascorbic acid 0.1g/l don't interfere with the essay up to given levels.

PRESENTATION

2 X 120 ml	Cat No 1301	240 tests
4 X 250 ml	Cat No 1302	1000 tests

BIBLIOGRAPHY

-Richmond W., Clin. Chem.19, 1350(1973)
-Roeschlau P.,Bernt E. et Gruber W.,J. Clin.Chem.Clin.Biochem.12, 403 (1974).
-Trinder P.,Ann. Clin .Biochem .6,24(1969).
-Clin.Chem. 20,470 (1974).

The following symbols are used on labels

IVD — **For in vitro diagnostic use**

Use day (last day of the month)

Temperature limitation

LOT — **Bath code**

REF — **Code**