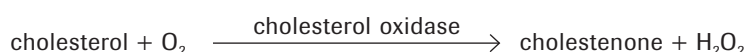
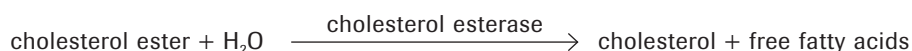


Cholesterol

Test principle: Enzymatic colorimetric



The measurement of cholesterol levels is usually performed using cholesterol esterase (CE), cholesterol oxidase (CO), and peroxidase (POD). In 1974, Roeschlau and Allain described the first fully enzymatic method.

Cholesterol esters are cleaved by the action of cholesterol esterase to yield free cholesterol and fatty acids. Cholesterol oxidase then catalyzes the oxidation of cholesterol to cholest-4-en-3-one and hydrogen peroxide. The hydrogen peroxide formed can be used to oxidize an indicator in the presence of POD. In this test, H₂O₂ oxidizes 4-aminoantipyrine and phenol to a quinoneimine dye in the presence of peroxidase (POD). The color intensity of the dye formed is directly proportional to the cholesterol concentration. It is determined by measuring the increase in absorbance at 512 nm.

Proposed reagent composition

Composition	Concentration	Catalog Number
Buffer (PIPES, pH 6.8)	75 mmol/l	10 239 500 103
Mg ²⁺ (Mg-Aspartate)	10 mmol/l	
4-Aminoantipyrine	>0.15 mmol/l	10 073 474 001
Phenol	>4.2 mmol/l	
Fatty alcohol polyglycol ether	1 %	
Cholesterol esterase (CE)	>0.5 kU/l	11 641 735 103
Cholesterol oxidase (CO)	>0.15 kU/l	11 479 709 103
Peroxidase (POD)	>0.25 kU/l	11 378 783 103
Detergent, such as Polidocanol		10 831 620 103
Na-Cholate		10 261 084 103
Preservative, such as Sodium azide		

Note: Do not use phosphate buffer.

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