Cholesterol FS*

In-vitro-Diagnostic for veterinary use only

Diagnostic reagent for quantitative in vitro determination of cholesterol in serum or plasma on DiaSys respons®910 VET

Order Information

Cat. No. 1 1300 99 11 923
4 containers for 200 tests each

Method

"CHOD-PAP": enzymatic photometric test

Principle

Determination of cholesterol after enzymatic hydrolysis and oxidation. The colorimetric indicator is quinoneimine which is generated from 4-aminoantipyrine and phenol by hydrogen peroxide under the catalytic action of peroxidase (Trinder's reaction).

Cholesterol ester + H_2O $\xrightarrow{CHE}$ Cholesterol + Fatty acid

Cholesterol + O_2 $\xrightarrow{CHO}$ Cholesterol-3-one + H_2O_2

2 H_2O_2 + 4-Aminoantipyrine + Phenol $\xrightarrow{POD}$ Quinoneimine + 4 H_2O

Reagent

Components and Concentrations

Good's buffer	pH 6.7	50 mmol/L
Phenol		5 mmol/L
4-Aminoantipyrine		0.3 mmol/L
Cholesterol esterase	(CHE)	≥ 200 U/L
Cholesterol oxidase	(CHO)	≥ 50 U/L
Peroxidase	(POD)	≥ 3 kU/L

Storage Instructions and Reagent Stability

The reagent is stable up to the end of the indicated month of expiry, if stored at 35.6 – 46.4°F, protected from light and contamination is avoided. DiaSys respons containers provide protection from light. Do not freeze the reagent!

Warnings and Precautions

1. The reagent contains sodium azide (0.95 g/L) as preservative. Do not swallow! Avoid contact with skin and mucous membranes.
2. In very rare cases, samples of animals with gammopathy might give falsified results.
3. N-acetylcysteine (NAC), acetaminophen and metamizole medication leads to falsely low results.
4. Please refer to the safety data sheets and take the necessary precautions for the use of laboratory reagents. For diagnostic purposes, the results should always be assessed with the animal's medical history, clinical examinations and other findings.
5. For professional use only!

Waste Management

Please refer to local legal requirements.

Reagent Preparation

The reagent is ready to use. The bottles are placed directly onto the reagent rotor.

Specimen

Serum, heparin plasma or EDTA plasma

Stability :
2 days 39.2°F to 46.4°F

Discard contaminated specimens.

Calibrators and Controls

For the calibration the DiaSys TruCal U calibrator is recommended. The assigned values of the calibrator have been made traceable to the reference method gas chromatography-isotope dilution mass spectrometry (GC-IDMS). For internal quality control DiaSys TruLab N and P or TruLab L controls should be assayed. Each laboratory should establish corrective actions in case of deviations in control recovery.

	Cat. No.	Kit size
TruCal U	5 9100 99 11 063	20 x 3 mL
TruLab N	5 9000 99 11 062	20 x 5 mL
TruLab P	5 9050 99 11 062	20 x 5 mL
TruLab L Level 1	5 9020 99 11 065	3 x 3 mL
TruLab L Level 2	5 9030 99 11 065	3 x 3 mL

Performance Characteristics

The performance characteristics were evaluated with human samples and might differ from results obtained with various animal specimen.

Measuring range up to 750 mg/dL cholesterol (in case of higher concentrations re-measure samples after manual dilution with NaCl solution (9 g/L) or use rerun function).	
Limit of detection**	1 mg/dL cholesterol
On-board stability	8 weeks
Calibration stability	4 weeks

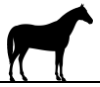
Interfering substance	Interferences < 10%	Cholesterol [mg/dL]
Ascorbate	up to 6 mg/dL	222
Hemoglobin	up to 230 mg/dL	152
	up to 230 mg/dL	223
Bilirubin, conjugated	up to 15 mg/dL	147
	up to 25 mg/dL	236
Bilirubin, unconjugated	up to 21 mg/dL	149
	up to 23 mg/dL	237
Lipemia (triglycerides)	up to 2200 mg/dL	136
	up to 2200 mg/dL	234
For further information on interfering substances refer to Young DS. Effects of Drugs on Clinical Laboratory Tests. 5th. ed. Volume 1 and 2. Washington, DC: The American Association for Clinical Chemistry Press, 2000.		

** according to NCCLS document EP17-A, vol. 24, no. 34

Conversion Factor

Cholesterol [mg/dL] x 0.02586 = Cholesterol [mmol/L]

Reference Range

				
DOG	**CAT**	**HORSE**	**CATTLE**	**Unit**
124 – 327	**63 – 258**	**67 – 136 ***	**132 – 332**	**mg/dL**

Source:
Reference ranges have been validated by DiaSys USA according to National Reference Laboratory standards.

* Estimated: Based on preliminary results and findings in the literature.

Each laboratory should check if the reference ranges are transferable to its own animal population and determine own reference ranges if necessary.

Manufacturer

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