Glucose Hexokinase FS*

In-vitro-Diagnostic for veterinary use only

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

Order Information

Cat. No. 1 2511 99 11 920
4 twin containers for 200 tests each

Method

Enzymatic UV test using hexokinase

Principle

Glucose + ATP $\xrightarrow{HK}$ Glucose-6-phosphate + ADP

Glucose-6-phosphate + NAD^+ $\xrightarrow{G6P\text{-}DH}$ Gluconate-6-P + NADH + H^+

Reagents

Components and Concentrations

R1:	TRIS buffer	pH 7.8	100 mmol/L
	Mg^{2+}		4 mmol/L
	ATP		2.1 mmol/L
	NAD		2.1 mmol/L
R2:	Mg^{2+}		4 mmol/L
	Hexokinase (HK)		≥ 7.5 kU/L
	Glucose-6-phosphatedehydrogenase (G6P-DH)		≥ 7.5 kU/L

Storage Instructions and Reagent Stability

The reagents are 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 reagents!

Warnings and Precautions

1. The reagents contain sodium azide (0.95 g/L) as preservative. Do not swallow! Avoid contact with skin and mucous membranes.
2. Reagent 2 contains animal material. Handle the product as potentially infectious according to universal precautions and good laboratory practice.
3. In very rare cases, samples of animals with gammopathy might give falsified 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 reagents are ready to use. The bottles are placed directly into the reagent rotor.

Specimen

Serum or heparin plasma

Separate at the latest 1h after blood collection from cellular contents.

Stability in plasma after addition of a glycolytic inhibitor (Fluoride, monoiodacetate, mannose):

2 days at 39.2°F to 46.4°F

Stability in serum (separated from cellular contents, hemolysis free) without adding a glycolytic inhibitor:

2 days at 39.2°F

Discard contaminated specimens.

Calibrators and Controls

For calibration the DiaSys TruCal U calibrator is recommended. The assigned values of this 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 controls should be assayed. Each laboratory should establish corrective action 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

Performance Characteristics

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

Measuring range up to 500 mg/dL glucose (in case of higher concentrations re-measure samples after manual dilution with NaCl solution (9 g/L) or use rerun function).	
Limit of detection**	2 mg/dL glucose
On-board stability	6 weeks
Calibration stability	6 weeks

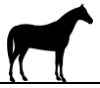
Interfering substance	**Interferences < 10%**	**Glucose [mg/dL]**
Ascorbate	up to 30 mg/dL	179
Hemoglobin	up to 500 mg/dL	80.1
	up to 500 mg/dL	139
Bilirubin, conjugated	up to 60 mg/dL	82.3
	up to 60 mg/dL	106
Bilirubin, unconjugated	up to 60 mg/dL	85.2
	up to 60 mg/dL	109
Lipemia (triglycerides)	up to 1800 mg/dL	82.1
	up to 2000 mg/dL	98.8
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

Glucose [mg/dL] x 0.05551 = Glucose [mmol/L]

Reference Range

				
DOG	**CAT**	**HORSE**	**CATTLE**	**Unit**
82 – 116	**69 – 131**	**78 – 107**	**52 – 77**	**mg/dL**

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

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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