



Lipase (BR-160/ BR-120)

Enzymatic Colorimetric Method

IVD

PRODUCT CODE

CZ011

INTENDED USE

Lipase kit is used for the determination of Lipase activity in serum/plasma.

CLINICAL SIGNIFICANCE

Lipase is a pancreatic enzyme necessary for the absorption and digestion of nutrients that catalyses the hydrolysis of glycerol esters of fatty acids. Determination of lipase is used for diagnosis of diseases such as acute and chronic pancreatitis and obstruction of the pancreatic duct. Clinical diagnosis should not be made on a single test result.

PRINCIPLE

In the presence of colipase and bile acids Lipase splits the synthetic substrate (1, 2- O-Dilauryl-rac-glycero-3-glutaric acid (6-methyl-resorufin-ester) to glycerol and methylresorufin ester. The rate of methyl resorufin formation, measured photometrically is proportional to the catalytic concentration of lipase present in the sample

REAGENT COMPOSITION

R 1 Buffer	Goods buffer pH 8.0	40 mmol/L
	Colipase	> 1 mg/L
	Deoxycholate	1.8 mmol/L
	Taurodeoxycholate	7.2 mmol/L
	Calcium chloride	0.1 mmol/L
R 2 Substrate	Tartarate Buffer pH	15 mmol/L
	4.0 Color substrate	> 0.7 mmol/L

REAGENT PREPARATION

Lipase R1 and Lipase R2 are ready to use.

Stability: Reconstituted calibrator is stable up to 7 days at 2 - 8° and for at least 4 weeks when stored at -20° C. don't repeatedly thaw and re-freeze.

REAGENT STORAGE AND STABILITY

All the components of the kit are stable until the expiration date on the label when stored tightly closed at 2-8°C, protected from light and contaminations prevented during their use. Do not use reagents over the expiration date.

SPECIMEN

Serum or Plasma with sodium citrate, EDTA or heparin

Lipase is reported to be stable in serum for 5 days at 2-8° C.

PRECAUTION

To avoid contamination, use clean laboratory materials, use clean, dry disposable pipette tips for dispensing. Close reagent and calibrator bottles immediately after use. Avoid direct exposure of working reagent to light.

PROCEDURE

APPLICATION ON AUTO BIOCHEMISTRY ANALYZERS

BR-160 AUTO BIOCHEMISTRY ANALYZER					
TEST NAME	lipase	SAMPLE VOLUME		4	
FULL NAME	lipase				
	PRI.	SEC.	REAGENT VOLUME	R1	R2
WAVE LENGTH	578	700		200	50
		START	END		
ASSAY /POINT	FIXED - TIME	17	22		
DECIMAL PLACE	2				
UNIT	u/L				
	LOW	HIGH			
LINEARITY RANGE	0	300			

BR-120 AUTO BIOCHEMISTRY ANALYZER					
TEST NAME	lipase		SAMPLE VOLUME	4	
FULL NAME	lipase				
	PRI.	SEC.	REAGENT VOLUME	R1	R2
WAVE LENGTH	578	700		200	50
ASSAY /POINT	FIXED - TIME	START	END		
		26	34		
DECIMAL PLACE	2				
UNIT	u/L				
LINEARITY RANGE	LOW	HIGH			
	0	300			

LINEARITY

The procedure is linear up to 300 U/L. If the activity is greater than 300 U/L, dilute the sample with normal saline and repeat the assay. Multiply the result with dilution factor.

NORMAL RANGE

Up to 60 U/L, it is recommended that each laboratory establish its own normal range representing its patient population.

QUALITY CONTROL

Control sera are recommended to monitor the performance of assay procedures.

If control values are found outside the defined range, check the instrument, reagents and technique for problems.

Each laboratory should establish its own Quality Control scheme and corrective actions if controls do not meet the acceptable tolerances.

INTERFERENCES

Triglycerides at 300 mg/dL interfere on determination reducing the activity of enzyme of 6%. Hemoglobin concentration lower than 150 mg/dL and Bilirubin lower than 20 mg/dL do not interfere. A list of drugs and other interfering substances with lipase determination has been reported by Young et. al^{2,3}.

NOTE

1. In some storage conditions (i.e., storage at a temperature lower than the one indicated) a precipitate may appear in the vial that will not influence that the reagent performance; however, it is recommended to resuspend the product with a slight rotation.
2. In order to avoid contamination, it is recommended to use disposable material.

SYMBOL ON LABELS

IVD	in vitro diagnostics		manufacturing date
LOT	lot number		expiry date
REF	catalogue number		manufacturer
	temperature limit		instruction for use

BIBLIOGRAPHY

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