

Fructosamine Assay Kit (modified NBT method)

Product Information

Common Name

Fructosamine

Cat.No. Kit-3333

Product Overview

The Fructosamine (FMN) Assay Kit based on the reduction of Tetranitroblue tetrazolium chloride (NBT) to formazan under alkaline conditions by fructosamine in human serum. The content of fructosamine can be calculated by comparing the absorbance change at 546 nm of the fructosamine calibration solution to the samples.

Applications

This kit is used to quantitatively determine the content of fructosamine in human serum.

Storage

Store for up to 12 months at 2 - 8°C in the dark. After opening, the reagent remains stable for 30 days at 2 - 8°C in dark conditions.

Kit Components

Buffer:

2-amino-2-methyl-1-propanol buffer pH 10.20

Nitrotetrazolium chloride blue 4mmol / L

Anhydrous sodium carbonate 140mmol / L

Calibrator: plasma extract 1.5mmol / L

Technical Notes

When the concentration of the sample exceeds the upper limit of the measurable linear range, a confirmation experiment is required, that is, dilute the auspicious product with physiological saline, and multiply the measurement result by the dilution factor.

Product Performance:

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1. Linear range: 0.00mmol/L-6.00mmol/L $r \geq 0.990$.
2. Precision: Intra-assay CV $\leq 5.0\%$; Inter-assay CV $\leq 8.0\%$.
3. Accuracy: inaccuracy $\leq 15\%$.
4. Blank absorbance: The absorbance value ≤ 0.300 at 546nm wavelength and optical path 10mm. Blank absorbance change rate value ≤ 0.004

Compatible Sample Types

The sample should be fresh serum. Samples testing should be completed at the same day after collected.

Assay Protocol

1. Measurement conditions

Analysis method: Two-point rate method

Dominant Wavelength: 546m

Response direction: positive

Calibration value: 1.5mmol / L

Sample size: 25 μ L

Reagent volume: 500 μ L

2. Semi-automatic biochemical analyzer measurement mode

Delay time 60s

Measurement time 60s

Reagent: 500g/L

Sample: 25 μ L

Analysis

$C_{sample} = (\Delta A_{sample} / \text{minute}) / (\Delta A_{calibration} / \text{minute}) * C_{calibrator}$

C_{sample} : sample concentration

$\Delta A_{sample} / \text{minute}$: change in absorbance per minute of the sample

$\Delta A_{calibration} / \text{minute}$: change in absorbance per minute of the calibrator;

$C_{calibrator}$: calibrator concentration.

In the above formula, $\Delta A_{sample} / \text{minute}$ and $\Delta A_{calibration} / \text{minute}$ are measured by the

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instrument, and the C calibrator is known.

Sensitivity

Reference Range: 0.8 ~ 2.0mmol / L

Recommendations: Each laboratory should establish its own reference range.