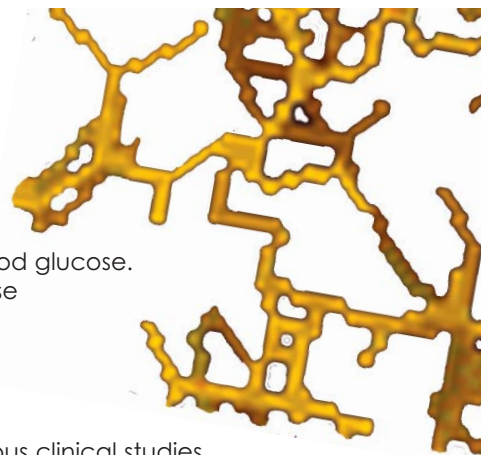


Fructosamine



Fructosamine

[glycated serum protein]



What is Fructosamine?

Serum fructosamine levels are elevated in diabetic patients with elevated blood glucose. Fructosamine is formed by a non-enzymatic Maillard reaction between glucose and amino acid residues of serum proteins.

Clinical Significance

Diabetes mellitus is a disease associated with poor glycaemic control. Numerous clinical studies, including the Diabetes Control and Complications Trial, have shown that diabetes related complications may be reduced by the long-term monitoring and tight control of blood glucose levels.

In the diabetic patient where blood glucose levels are abnormally elevated the concentration of fructosamine also increases. The measurement of fructosamine is useful in monitoring the blood glucose level over the preceding 2-3 weeks. It is therefore a medium term indicator of diabetic control, whereas, the measurement of blood glucose is only a short-term indicator.

How is Fructosamine measured?

The Randox assay is a specific enzymatic method for the direct determination of fructosamine in serum or plasma. Reagent 1 contains Proteinase K which digests the glycated protein to yield glycated protein fragments. Ketoamine oxidase in reagent 2 oxidises the ketoamine bond of the glycated protein fragments releasing hydrogen peroxide which is measured by a colorimetric Trinder end-point reaction.

High Performance Reagents

Wide Measuring Range - 11 - 1734 $\mu\text{mol/l}$.

Excellent Precision - The following coefficients of variation were obtained for fructosamine levels on a Hitachi™ 717 analyser.

	Fructosamine Mean ($\mu\text{mol/l}$)	Mean %CV	n
Intra-assay precision	195.47	1.51	20
	504.83	1.27	20
	768.84	0.94	20
Inter-assay precision	173.71	1.53	20
	439.88	0.83	20
	587.32	1.04	20

Excellent Sensitivity - 11 $\mu\text{mol/l}$.

Excellent Correlation with Reference Method - A correlation coefficient of 0.99 was obtained with the Furosine reference method.

Interference - The following analyte concentrations were not found to affect the assay.

Ascorbic acid	650 $\mu\text{mol/l}$
Bilirubin	737 $\mu\text{mol/l}$
Glucose	144 mmol/l
Haemoglobin	7 g/l
Triglycerides	18.92 mmol/l
Uric acid	2.7 mmol/l

Recovery - The assay exhibits a mean recovery of 99% across the measuring range.

Completely Automated Protocols - are available for a range of clinical chemistry analysers.

Sample Type - Suitable for use in serum and plasma samples.

Product Description	Size	Cat. No.
Fructosamine Kit	R1 5x25 ml	FR2992
	R2 5x5 ml	
R daytona™	R1 3x25 ml	FR3829
	R2 2x10 ml	
Calibrator	3x1 ml	FR2993
Control (Level 1)	3x1 ml	FR2994
Control (Level 3)	3x1 ml	FR2996