Insulin

Analytical Performance Specification

RCV Calculation

Matrix	BV Estimate	median CV estimate	lower CI limit	higher CI limit	Comments	Date Updated
Serum/plasma	•	25.4	21.1	37.1		21/9/2023
Serum/plasma	:2:	33.5	31.5	81.8		21/9/2023

Colour Key for References

Included In Meta Analysis Not Included In Meta Analysis

Reference	Dataset	Estimate of CVI	Estimate of CVG	Gender	Age	State of Well Being	Matrix	Sampling Interval
Biological variation of serum insulin: updated estimates from the European Biological Variation Study (EuBIVAS) and meta- analysis								
Anna Carobene*, Elisabet Gonzalez Lao, Margarida Simon, Massimo Locatelli, Abdurrahman Coşkun, Jorge Díaz-Garzón, Pilar Fernandez-Calle, Sverre Sandberg and Aasne K. Aarsand, , Clin Chem Lab Med, 518-522, 60, 2020	View	25.3	33.4	Mixed		Healthy	Serum	1 per Week
View								
Intra-individual variation: significant changes in parameters of lipid and carbohydrate metabolism in the individual and intra- individual variation in different test populations Godsland IF, Ann Clin Biochem, 618-24, 22, 1985 View	View	21.1	31.5	Mixed		Healthy	Plasma	1 per Week
Biological variation of glucose, insulin and lípids in lean, insulinsensitie and obese, insulin-resistant chinese males without diabetis Rizi EP, Baig S, Toh SA and	View	27.9	45.4	Males		Healthy	Serum	3 per Week

Khoo CM, Pathology, 510-2, 48, 2016 View Short-term, withinperson variability in clinical chemistry test results 2 per Serum 37.1 81.8 View Mixed Healthy Week Eckfeldt J, Chambless LI and Shen Y, Arch Pathol Lab Med, 496-500, 118, 1994 View Analytical and biological variability in biomarker measurement in the Hispanic Community Health Study/Study of Latinos 2 per Serum 36.9 66.78 View Males Healthy Thyagarajan B, Howard AG, Month Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME, Zhao L and Sotres-Alvarez D, Clin Chim Acta, 129-137, 463, 2016 View Analytical and biological variability in biomarker measurement in the **Hispanic Community** Health Study/Study of Latinos Non-2 per Serum View 30.3 92.63 Females Thyagarajan B, Howard AG, Month healthy Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME, Zhao L and Sotres-Alvarez D, Clin Chim Acta, 129-137, 463, 2016 View Within- and betweensubject variationin comoly measured anthropometricand biochemical variables. Plasma View 26.0 26.0 Mixed 22.7 Healthy 1 per Day Widjaja A, Morris RJ, Levy JC, Frayn KN, Manley SE and Turner RC, Clin Chem, 561-6, 45, 1999 View

	EFLM Biological Variation							
Quality goals for hormone testing							Unknown	
Ricós C and Arbós MA, Ann Clin Biochem, 353-8, 27, 1990	View	15.2	34.7	Mixed		Healthy	Unknown matrix	1 per Da
View								
Estimate of biological variation of laboratory analytes based on the third National Health and Nutrition Examination Survey Lacher DA, Hughes JP and Carroll MD, Clin Chem, 450-2, 51, 2005 View	View			Mixed	42.9	Healthy	Plasma	"No Sampling Intervals
Biological variation of								
glucose, insulin and lípids in lean, insulin- sensitie and obese, insulin-resistant chinese males without diabetis Rizi EP, Baig S, Toh SA and Khoo CM, Pathology , 510-2, 48, 2016 View	View	29.8	48.9	Males		Non- healthy	Serum	3 per Week
Covariance of metabolic and hemostatic risk indicators in men and women. Riese H, Vrikkotte TGM, Meijer P, Kluft C, De Geus EJC, Fibrinolysis & Proteolysis, 1-12, 14, 2001 View	View	22.0	30.2	Females	30.19	Healthy	Serum	2 per Da
Covariance of								
metabolic and hemostatic risk indicators in men and women. Riese H, Vrikkotte TGM, Meijer P, Kluft C, De Geus EJC, Fibrinolysis & Proteolysis, 1-12, 14, 2001	View	26.9	53.9	Males	45.23	Healthy	Serum	3 per Week
View								
Covariance of metabolic and hemostatic risk indicators in men and								

08/11/2023, 09:41

08/11/2023, 09:41 EFLM Biological Variation

2 per women. Serum View 18.9 43.9 Females 36.71 Healthy Week Riese H, Vrikkotte TGM, Meijer P, Kluft C, De Geus EJC, Fibrinolysis & Proteolysis, 1-12, 14, 2001 View Biological variation of serum insulin: updated estimates from the **European Biological Variation Study** (EuBIVAS) and metaanalysis 1 per Anna Carobene*, Elisabet Serum View 25.0 31.9 Males Healthy Week Gonzalez Lao, Margarida Simon, Massimo Locatelli, Abdurrahman Coşkun, Jorge Díaz-Garzón, Pilar Fernandez-Calle, Sverre Sandberg and Aasne K. Aarsand, , Clin Chem Lab Med, 518-522, 60, 2020 View Biological variation of serum insulin: updated estimates from the **European Biological** Variation Study (EuBIVAS) and metaanalysis 1 per Anna Carobene*, Elisabet Serum View 25.3 34.8 **Females** Healthy Week Gonzalez Lao, Margarida Simon, Massimo Locatelli, Abdurrahman Coşkun, Jorge Díaz-Garzón, Pilar Fernandez-Calle, Sverre Sandberg and Aasne K. Aarsand, , Clin Chem Lab Med, 518-522, 60, 2020 View Analytical and biological variability in biomarker measurement in the **Hispanic Community** Health Study/Study of Latinos 2 per Serum 22.3 80.7 Healthy View **Females** Thyagarajan B, Howard AG, Month Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME, Zhao L and Sotres-Alvarez D, Clin Chim Acta, 129-137, 463, 2016 View

Estimate of biological variation of laboratory analytes based on the third National Health and Nutrition Examination Survey Lacher DA, Hughes JP and Carroll MD, Clin Chem, 450-2, 51, 2005	View	25.2	55.9	Mixed	30.8	Healthy	Plasma	"No Sampling Intervals"
View								
Analytical and biological variability in biomarker measurement in the Hispanic Community Health Study/Study of Latinos Thyagarajan B, Howard AG, Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME, Zhao L and Sotres-Alvarez D, Clin Chim Acta, 129-137, 463, 2016	View	31.8	100.76	Males		Non- healthy	Serum	2 per Month
View								
Analytical and biological variability in biomarker measurement in the Hispanic Community Health Study/Study of Latinos Thyagarajan B, Howard AG, Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME, Zhao L and Sotres-Alvarez D, Clin Chim Acta, 129-137, 463, 2016 View	View	25.0	75.85	Mixed		Healthy	Serum	2 per Month
Analytical and								
biological variability in biomarker measurement in the Hispanic Community Health Study/Study of Latinos Thyagarajan B, Howard AG, Durazo-Arvizu R, Eckfeldt JH, Gellman MD, Kim RS, Liu K, Mendez AJ, Penedo FJ, Talavera GA, Youngblood ME. Zhao L and Sotres-	View	31.6	96.11	Mixed		Non- healthy	Serum	2 per Month

Alvarez D, Clin Chim Acta,
129-137, 463, 2016

View

Insulin-like growth factor binding protein 1 (IGFBP-1)

Insulin-like growth factor binding protein 3 (IGFBP-3)



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