

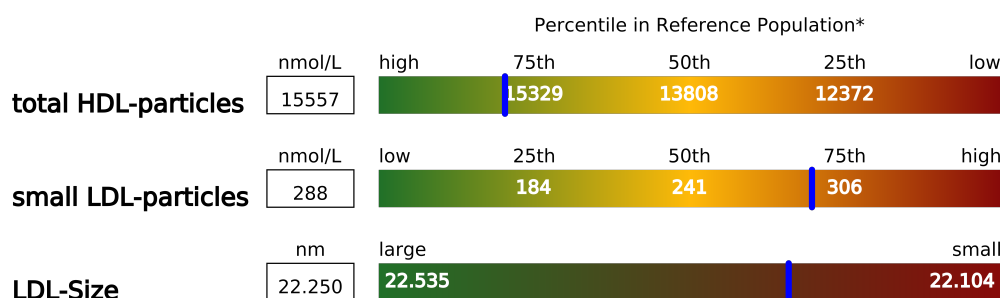
Analytical Report

Sample ID: 1107599424
Material: Serum
Sex: Male

Date of Birth: 1971-04-20
Analysis Software: lifespın LipoPRO V0.0.13
Date of Report: 2024-11-29

1 Summary of your Personal Profile

1.1 Particle Concentrations and Sizes



*lifespın reference population, for detailed information see section 3. The blue vertical lines represent the measured concentration.

1.2 Standard Lipid Parameters

Parameter		Concentration [mg/dL]	Relevant Range* [mg/dL]	Results
Total Cholesterol		275.9	>239	High
LDL-Cholesterol		155.7	129-159	Borderline High if there is no coronary artery disease. High if there is coronary disease.
HDL-Cholesterol		75.2	>59	Best
Triglycerides		186.8	150-199	Borderline High

*The used relevant ranges are sexspecific clinical references from the guideline of Mayo Clinic, USA. Details see section 3.

Exclusion of Liability RESEARCH USE ONLY (RUO): This document contains no medical diagnosis and does not replace the medical diagnosis of a physician.

Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Apo-A1	196.2	125.2-241.4	
Apo-A2	42.0	27.9-49.8	
Apo-B100	121.5	49.3-183.6	

*gray horizontal boxes represent 95% range of model, blue vertical lines represent sample value

1.3 Parameter Ratios

Parameter	Value [-/-]	Reference Range [-/-]	Plot*
LDL-Chol/HDL-Chol	2.071	0.830-4.770	
Apo-B100/Apo-A1	0.619	0.257-1.211	
Free LDL-Chol/LDL-Chol	0.208	0.207-0.208	
Free HDL-Chol/HDL-Chol	0.160	0.153-0.176	

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2 Detailed Lipoprotein Profile

2.1 Particle Sizes*

Parameter	Diameter [nm]	Reference Range [nm]	Plot**
Total HDL-particle size	8.795	8.444-9.078	
HDL-1 particle size	11.472	11.428-11.612	
HDL-2 particle size	10.224	10.214-10.226	
HDL-3 particle size	9.623	9.596-9.636	
HDL-4 particle size	8.216	8.130-8.314	
Total LDL-particle size	22.250	22.104-22.535	
LDL-1 particle size	24.406	24.365-24.445	
LDL-2 particle size	22.940	22.936-22.945	
LDL-3 particle size	22.350	22.350-22.350	
LDL-4 particle size	21.827	21.826-21.833	
LDL-5 particle size	21.135	21.132-21.137	
LDL-6 particle size	19.579	19.531-19.611	
Total VLDL-particle size	36.347	35.198-37.538	
VLDL-1 particle size	62.431	58.238-63.393	
VLDL-2 particle size	50.376	50.086-50.588	
VLDL-3 particle size	42.931	42.708-42.910	
VLDL-4 particle size	36.677	36.537-36.835	
VLDL-5 particle size	31.559	31.565-31.740	
Total Chylomicrons-particle size	86.158	80.370-87.219	

*Particle size is calculated as the mean diameter for each subfraction.

**gray horizontal boxes represent 95% range of model, blue vertical lines represent sample value

2.2 Particle Concentrations in Lipoprotein Main Classes and Subclasses*

Parameter	Concentration [nmol/L]	Reference Range [nmol/L]	Plot**
Lipoprotein Main Classes			
non-HDL particle number	1133	473-1679	
HDL-particle number	15557	10018-19037	
LDL-particle number	996	415-1447	
VLDL-particle number	88	23-189	
IDL-particle number	49	28-69	
Chylomicrons-particle number	0	<1	
Lipoprotein Subclasses			
HDL-1 particle number	1521	317-2542	
HDL-2 particle number	951	319-1542	
HDL-3 particle number	1532	793-2170	
HDL-4 particle number	11553	8019-13123	
LDL-1 particle number	364	172-492	
LDL-2 particle number	137	61-200	
LDL-3 particle number	53	22-79	
LDL-4 particle number	82	31-123	
LDL-5 particle number	71	25-107	
LDL-6 particle number	288	104-448	
VLDL-1 particle number	2	<6	
VLDL-2 particle number	5	1-11	
VLDL-3 particle number	12	3-30	
VLDL-4 particle number	30	10-72	
VLDL-5 particle number	40	10-74	

*Particle numbers are calculated using a particle model. From measurements of the total cholesterol and triglyceride levels in serum and the molar mass of these quantities, the model can estimate the particle concentration

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2.3 Concentrations in Lipoprotein Main Classes and Subclasses

Lipoprotein Main Classes

Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Cholesterol in			
HDL	75.2	38.6-103.2	
LDL	155.7	67.6-221.6	
IDL	17.8	10.1-25.0	
VLDL	26.6	6.4-63.4	
Chylomicrons	0.7	<3.8	
Free Cholesterol in			
HDL	12.1	6.7-16.0	
LDL	32.4	14.0-46.1	
IDL	3.3	1.9-4.7	
VLDL	6.7	1.7-15.3	
Chylomicrons	0.1	<0.5	
Esterified Cholesterol in			
HDL	63.1	31.9-87.3	
LDL	123.3	53.6-175.5	
IDL	14.5	8.2-20.3	
VLDL	19.9	4.7-48.0	
Chylomicrons	0.6	<3.3	
Triglycerides in			
HDL	11.7	6.0-16.1	
LDL	27.2	11.3-39.4	
IDL	23.3	13.2-32.7	
VLDL	121.5	29.6-289.9	
Chylomicrons	3.1	<17.6	
Phospholipids in			
HDL	101.7	56.7-135.0	
LDL	87.7	36.6-126.8	
IDL	12.2	7.0-17.2	
VLDL	22.9	5.8-51.7	
Chylomicrons	0.3	<1.6	

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Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Apo-A1 in HDL	196.2	125.2-241.4	
Apo-A2 in HDL	42.0	27.9-49.8	
Apo-B100 in LDL	102.9	41.2-152.2	
IDL	7.4	4.3-10.4	
VLDL	11.2	3.0-24.1	
Chylomicrons	0.0	<0.1	

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LDL-Subclasses

Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Cholesterol in			
LDL-1	77.1	36.5-104.0	
LDL-2	23.1	10.3-33.7	
LDL-3	8.1	3.3-12.1	
LDL-4	11.5	4.3-17.3	
LDL-5	8.9	3.1-13.3	
LDL-6	26.9	9.7-41.7	
Free Cholesterol in			
LDL-1	15.8	7.5-21.3	
LDL-2	4.8	2.2-7.1	
LDL-3	1.7	0.7-2.5	
LDL-4	2.4	0.9-3.7	
LDL-5	1.9	0.7-2.8	
LDL-6	5.7	2.1-8.8	
Esterified Cholesterol in			
LDL-1	61.4	29.0-82.8	
LDL-2	18.3	8.1-26.7	
LDL-3	6.4	2.6-9.5	
LDL-4	9.1	3.4-13.6	
LDL-5	7.0	2.4-10.5	
LDL-6	21.2	7.7-32.8	
Triglycerides in			
LDL-1	10.1	4.8-13.6	
LDL-2	2.9	1.3-4.3	
LDL-3	1.3	0.5-1.9	
LDL-4	2.4	0.9-3.6	
LDL-5	2.3	0.8-3.4	
LDL-6	8.1	2.9-12.7	
Phospholipids in			
LDL-1	33.4	15.9-44.9	
LDL-2	10.0	4.4-14.5	
LDL-3	4.3	1.8-6.4	
LDL-4	7.8	2.9-11.7	
LDL-5	7.3	2.5-10.9	
LDL-6	24.9	9.0-38.8	

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HDL-Subclasses

Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Cholesterol in			
HDL-1	23.4	5.3-38.5	
HDL-2	8.4	2.8-13.6	
HDL-3	10.0	5.1-14.2	
HDL-4	33.4	22.7-39.1	
Free Cholesterol in			
HDL-1	2.8	0.6-4.6	
HDL-2	1.2	0.4-2.0	
HDL-3	1.6	0.8-2.2	
HDL-4	6.5	4.4-7.5	
Esterified Cholesterol in			
HDL-1	20.6	4.7-33.9	
HDL-2	7.2	2.4-11.6	
HDL-3	8.4	4.3-12.0	
HDL-4	26.9	18.3-31.6	
Triglycerides in			
HDL-1	3.6	0.8-6.0	
HDL-2	1.3	0.4-2.1	
HDL-3	1.6	0.8-2.3	
HDL-4	5.2	3.5-6.1	
Phospholipids in			
HDL-1	22.6	5.0-37.3	
HDL-2	10.2	3.4-16.5	
HDL-3	13.9	7.2-19.8	
HDL-4	55.0	37.5-64.0	

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VLDL-Subclasses

Parameter	Concentration [mg/dL]	Reference Range [mg/dL]	Plot*
Cholesterol in			
VLDL-1	2.14	0.05-8.26	
VLDL-2	3.83	0.66-9.21	
VLDL-3	5.53	1.20-14.11	
VLDL-4	7.97	2.52-19.39	
VLDL-5	7.11	1.73-13.37	
Free Cholesterol in			
VLDL-1	0.37	0.01-1.40	
VLDL-2	0.79	0.14-1.91	
VLDL-3	1.30	0.28-3.32	
VLDL-4	2.11	0.67-5.10	
VLDL-5	2.08	0.50-3.91	
Esterified Cholesterol in			
VLDL-1	1.78	0.04-6.86	
VLDL-2	3.03	0.52-7.30	
VLDL-3	4.23	0.92-10.79	
VLDL-4	5.86	1.85-14.28	
VLDL-5	5.03	1.22-9.46	
Triglycerides in			
VLDL-1	10.14	0.24-39.09	
VLDL-2	15.75	2.70-37.90	
VLDL-3	24.60	5.38-62.75	
VLDL-4	39.18	12.37-95.47	
VLDL-5	31.86	7.79-60.03	
Phospholipids in			
VLDL-1	1.17	0.03-4.44	
VLDL-2	2.37	0.41-5.69	
VLDL-3	3.84	0.84-9.80	
VLDL-4	7.67	2.43-18.44	
VLDL-5	7.80	1.90-14.68	

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3 Notes

Interpretation of the measured concentration values according to clinical references from the guideline of Mayo Clinic, USA.

Parameter	Unit	Reference	Result
Cholesterol	mg/dL	<200	Desirable
		200-239	Borderline High
		>239	High
LDL-Cholesterol	mg/dL	<70	Best for people who have coronary artery disease.
		<100	Optimal for people at risk of coronary artery disease or who have diabetes.
		100-129	Near Optimal if there is no coronary artery disease. High if there is coronary disease.
		129-159	Borderline High if there is no coronary artery disease. High if there is coronary disease.
		159-189	High if there is no coronary artery disease. Very high if there is coronary disease.
		>189	Very High
HDL-Cholesterol	mg/dL	<40	Poor
		40-59	Better
		>59	Best
Triglycerides	mg/dL	<150	Desirable
		150-199	Borderline High
		199-499	High
		>499	Very High

In the following an explanation of the technical terms and abbreviations used in this report is given in the following table.

Technical terms & Abbreviations	Description
Plot	Gray horizontal boxes represent the 95% range of model, blue vertical lines represent sample value.
mg/dL mmol/L nmol/L nm	The units mg/dL (milligram/decilitre), mmol/L (millimol/litre), nmol/L (nanomol/litre) and nm (nanometer) are different specifications of concentration and sizes of lipoproteins in the blood.
Reference Range	The reference values are derived from the 95% concentration range of 3242 measured samples from healthy donors (1591 female and 1651 male donors) whereby the sample handling took place under very controlled conditions. Some parameters are either not present or can only be found in very small amounts in blood samples of healthy donors and thus the concentration is usually below limit of detection. In this case the report shows n.d. instead of reference range.
n.d.	Not detectable - this parameter was not detected in the blood sample.
CHOL	Cholesterol
HDL	High Density Lipoprotein
LDL	Low Density Lipoprotein
IDL	Intermediate Density Lipoprotein
VLDL	Very Low Density Lipoprotein
Apo-A1	Apolipoprotein-A1
Apo-A2	Apolipoprotein-A2
Apo-B100	Apolipoprotein-B100

*****End of Report*****