

## SERVICE DELIVERABLES FOR CORD BLOOD ANALYSIS

### Research Use only

All listed biomarkers are available for Serum and Heparin plasma samples.

Biomarkers marked with \* are not available for EDTA plasma samples.

Biomarkers marked with \*\* are not available for Citrate plasma samples.

Name	Unit	Name	Unit
<b>Cholesterol</b>		Isoleucine	mmol/l
Total cholesterol	mmol/l	Leucine	mmol/l
VLDL cholesterol	mmol/l	Valine	mmol/l
Remnant cholesterol (non-HDL, non-LDL -cholesterol)	mmol/l	<b>Aromatic amino acids</b>	
LDL cholesterol	mmol/l	Phenylalanine	mmol/l
HDL cholesterol	mmol/l	Tyrosine	mmol/l
HDL2 cholesterol	mmol/l	Glycolysis related metabolites	Unit
HDL3 cholesterol	mmol/l	<b>Glucose</b>	
Total esterified cholesterol	mmol/l	<b>mmol/l</b>	
Total free cholesterol	mmol/l	Lactate	mmol/l
<b>Glycerides and phospholipids</b>		Pyruvate *	mmol/l
Total triglycerides	mmol/l	Citrate **	mmol/l
Triglycerides in VLDL	mmol/l	Glycerol *	mmol/l
Triglycerides in LDL	mmol/l	<b>Ketone bodies</b>	
Triglycerides in HDL	mmol/l	Acetate	mmol/l
Phosphoglycerides	mmol/l	Acetoacetate	mmol/l
Ratio of triglycerides to phosphoglycerides	ratio	Beta-hydroxybutyrate	mmol/l
Total cholines	mmol/l	<b>Fluid balance</b>	
Phosphatidylcholines	mmol/l	Creatinine	mmol/l
Sphingomyelins	mmol/l	Albumin	signal area
<b>Apolipoproteins</b>		<b>Inflammation</b>	
Apolipoprotein B	g/l	Glycoprotein acetyls	mmol/l
Apolipoprotein A1	g/l	<b>Lipoprotein subclasses</b>	
Ratio of apolipoprotein B to apolipoprotein A1	ratio	<b>Chylomicrons and extremely large VLDL (particle diameters from 75 nm upwards)</b>	
<b>Fatty acids</b>		Concentration of chylomicrons and extremely large VLDL particles	mol/l
Total fatty acids	mmol/l	Total lipids in chylomicrons and extremely large VLDL	mmol/l
Degree of unsaturation	degree	<b>Very large VLDL (average diameter 64 nm)</b>	
Omega-3 fatty acids	mmol/l	Concentration of very large VLDL particles	mol/l
Omega-6 fatty acids	mmol/l	Total lipids in very large VLDL	mmol/l
Polyunsaturated fatty acids	mmol/l	<b>Large VLDL (average diameter 53.6 nm)</b>	
Monounsaturated fatty acids	mmol/l	Concentration of large VLDL particles	mol/l
Saturated fatty acids	mmol/l	Total lipids in large VLDL	mmol/l
Docosahexaenoic acid	mmol/l	<b>Medium VLDL (average diameter 44.5 nm)</b>	
Linoleic acid	mmol/l	Concentration of medium VLDL particles	mol/l
<b>Fatty acid ratios</b>		Total lipids in medium VLDL	mmol/l
Ratio of omega-3 fatty acids to total fatty acids	%	<b>Small VLDL (average diameter 36.8 nm)</b>	
Ratio of omega-6 fatty acids to total fatty acids	%	Concentration of small VLDL particles	mol/l
Ratio of polyunsaturated fatty acids to total fatty acids	%	Total lipids in small VLDL	mmol/l
Ratio of monounsaturated fatty acids to total fatty acids	%		
Ratio of saturated fatty acids to total fatty acids	%		
Ratio of docosahexaenoic acid to total fatty acids	%		
Ratio of linoleic acid to total fatty acids	%		
<b>Amino acids</b>			
Alanine	mmol/l		
Glutamine	mmol/l		
Glycine *	mmol/l		
Histidine	mmol/l		
Branched-chain amino acids	Unit		

Name	Unit
<b>Very small VLDL (average diameter 31.3 nm)</b>	
Concentration of very small VLDL particles	mol/l
Total lipids in very small VLDL	mmol/l
<b>IDL (average diameter 28.6 nm)</b>	
Concentration of IDL particles	mol/l
Total lipids in IDL	mmol/l
<b>Large LDL (average diameter 25.5 nm)</b>	
Concentration of large LDL particles	mol/l
Total lipids in large LDL	mmol/l
<b>Medium LDL (average diameter 23 nm)</b>	
Concentration of medium LDL particles	mol/l
Total lipids in medium LDL	mmol/l
<b>Small LDL (average diameter 18.7 nm)</b>	
Concentration of small LDL particles	mol/l
Total lipids in small LDL	mmol/l
<b>Very large HDL (average diameter 14.3 nm)</b>	
Concentration of very large HDL particles	mol/l
Total lipids in very large HDL	mmol/l
<b>Large HDL (average diameter 12.1 nm)</b>	
Concentration of large HDL particles	mol/l
Total lipids in large HDL	mmol/l
<b>Medium HDL (average diameter 10.9 nm)</b>	
Concentration of medium HDL particles	mol/l
Total lipids in medium HDL	mmol/l
<b>Small HDL (average diameter 8.7 nm)</b>	
Concentration of small HDL particles	mol/l
Total lipids in small HDL	mmol/l
<b>Lipoprotein particle sizes</b>	
Average diameter for VLDL particles	nm
Average diameter for LDL particles	nm
Average diameter for HDL particles	nm

If Nightingale is not able to deliver the Service Deliverables due to inability of Nightingale's Service to analyse the data with more than 20% of metabolic measures missing for a Sample, there will be no charge for the respective Sample.