

## SERVICE DELIVERABLES FOR CEREBROSPINAL FLUID ANALYSIS

All listed biomarkers are available for Cerebrospinal Fluid samples.  
Biomarkers marked with \* are not available for 150 µL volume.

Name	Unit
<b>Amino acids</b>	
Alanine	mmol/l
Glutamine	mmol/l
Histidine	mmol/l
Lysine	mmol/l
<b>Aromatic amino acids</b>	
Phenylalanine	mmol/l
Tyrosine	mmol/l
<b>Branched-chain amino acids</b>	
Leucine	mmol/l
Isoleucine	mmol/l
Valine	mmol/l
<b>Carbohydrates</b>	
Glucose	mmol/l
Fructose	mmol/l
Mannose	mmol/l
Myo-inositol	mmol/l
<b>Energy metabolites</b>	
Citrate	mmol/l
Creatine	mmol/l
Lactate	mmol/l
Pyruvate	mmol/l
<b>Fluid balance</b>	
Creatinine	mmol/l
<b>Ketone bodies</b>	
3-Hydroxybutyrate	mmol/l
Acetate	mmol/l
<b>Miscellaneous</b>	
2-Hydroxyisovalerate	mmol/l
2-Hydroxybutyrate	mmol/l
3-Hydroxyisobutyrate	mmol/l
2-Ketoisovalerate	mmol/l
3-Hydroxyisovalerate	mmol/l
Ascorbate	mmol/l
Formate	mmol/l
Urea *	mmol/l

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.