



Nightingale CSF Biomarker Analysis Service

Features

- ▶ *Comprehensive biomarker panel*
- ▶ *Absolute biomarker quantification*
- ▶ *High-throughput*
- ▶ *Fast results delivery*
- ▶ *Affordable service*

Metabolic biomarker analysis of cerebrospinal fluid (CSF)

Metabolic biomarker analysis of CSF samples provides the opportunity to elucidate molecular mechanisms underpinning important neurodegenerative diseases, such as multiple sclerosis, Parkinson's disease, ALS and dementia. A key area of application is biomarker discovery for disease onset and prognosis. Nightingale CSF Biomarker Analysis Service opens possibilities to uncover novel biomarkers with a strong translational impact, for example biomarkers that facilitate assessment of neurodegenerative disease progression.

Nightingale's high-throughput CSF biomarker analysis service offers a cost-effective solution, accommodating cohorts and trials of any size, and providing quantitative and repeatable biomarker quantification. The biomarker levels are provided in absolute concentration units, facilitating epidemiological analyses, including combination with other biomarker measures, genomic data and biofluids. By combining metabolic biomarker analyses from several biofluids it is possible to uncover molecular insights for biomarkers across the blood-brain barrier.

▶ Quality

Nightingale Health is dedicated to delivering high quality results that guarantee the validity of scientific findings and allow for effective clinical translation. As proof of our commitment, Nightingale Health's quality management system has been certified according to EN ISO 13485 standard. The CSF biomarker analysis service will be part of the certified quality management system. All our biomarker analysis services provide highly repeatable metabolite measures that are delivered in absolute concentrations and free of batch effects.

Applications

- Molecular epidemiology
- Biomarkers for onset of Alzheimer's, Parkinson's and Multiple Sclerosis
- Understand molecular biology of CSF
- Clarify link between vascular and neurological diseases

Tech specifications

Technology/ method	1H NMR Spectroscopy, Nightingale Health's proprietary analysis
Specimen type	Human CSF
Sample volume	150µL or 500µL
Number of biomarkers	Approx. 30
Result report format	Spreadsheet and graphical reports
Result units	Absolute biomarker quantification (mmol/l)
Sample container requirements	Outer diameter of vial less than 13mm or in 96-well plate format
Sample storage	Long-term storage -70°C or below
Sample shipping	In dry ice

List of Biomarkers

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



Nightingale

Nightingale Health Ltd. provides a NMR (Nuclear Magnetic Resonance) based metabolomics technology, supplying biomarker analysis services for human blood, urine, CSF and umbilical cord blood samples. By measuring biomarkers from multiple pathways in a single experiment, Nightingale equips public health researchers with comprehensive insights into the effects of lifestyle factors and future disease risk, accelerating future breakthroughs in precision medicine. In the long term, the company plans to fully integrate its services into clinical practice, helping to empower patients to follow-up on their own well-being and take proactive steps to stay healthy.



See also

[Nightingale Blood Analysis Service](#)

[Nightingale Urine Biomarker Analysis Service](#)

[Nightingale Cord Blood Biomarker Analysis Service](#)

www.nightingale.health