Nightingale Urine Biomarker Analysis Service

Fully quantitative metabolic data for novel scientific discoveries powered by recent breakthrough in metabolomics technology.

Nightingale Health

Powerful platform enabled by NMR

Robust and highly reproducible results

Our fully automated analysis process is constantly monitored. NMR technology allows high reproducibility which ensures consistent and reliable results across all sample sets.

Accurate and fully quantified metabolic data

Not only our measurement of the samples, but also our quantification process of the NMR spectral data is fully automated, which provides precise and accurate metabolite results in absolute concentration units.

Fast, cost-efficient and scalable technology

We use a high-throughput NMR technology which ensures efficient analysis for sample sets of all sizes without batch effects.

Comprehensive overview of an individual's health

Biomarkers in our panel provide a physiologically meaningful picture of the overall health making it possible to explore novel connections between metabolites and an individual's health status.

APPLICATION EXAMPLES

Early risk detection and prognostics of type 1 and type 2 diabetes as well as diabetic complications, especially for diabetic kidney disease.

Molecular understanding of cardiometabolic risk factors such as adiposity and body fat distribution, and what role they play in the disease etiology.

Genetic regulation of urine metabolism and further implications to disease etiology.

Exploring metabolic effects of an individual's diet and lifestyle on health.

TECH SPECIFICATIONS

Technology/ method	1H NMR Spectroscopy, Nightingale Health's proprietary analysis
Sample volume	Minimum requirement 500 µL*
Number of biomarkers	51
Result units	Absolute biomarker quantification (mmol/l and ratio to creatinine)
Required sample storage	Long-term storage -70°C or below

*Absolute minimum sample volume is 500 µL of urine. However, to ensure that we are able to aspirate required volume for your vials, we recommend to send a larger volume, for example 600 µL or even more.

LB-0428 3./2023

List of Biomarkers

Amino acids	
Alanine	mmol/l & ratio to creatinine
Glutamine	mmol/l & ratio to creatinine
Glycine	mmol/l & ratio to creatinine
Taurine	mmol/l & ratio to creatinine
Threonine	mmol/l & ratio to creatinine
Tryptophan	mmol/l & ratio to creatinine
Branched-chain amino acids	
Isoleucine	mmol/l & ratio to creatinine
Leucine	mmol/l & ratio to creatinine
Valine	mmol/l & ratio to creatinine
Aromatic amino acids	
Tyrosine	mmol/l & ratio to creatinine
Dietary metabolites	
2-Furoylglycine	mmol/l & ratio to creatinine
Arabinose	mmol/l & ratio to creatinine
Ethanol	mmol/l & ratio to creatinine
HPHPA	mmol/l & ratio to creatinine
Mannitol	mmol/l & ratio to creatinine
Proline betaine [1]	mmol/l & ratio to creatinine
Propylene glycol [1]	mmol/l & ratio to creatinine
Quinic acid	mmol/l & ratio to creatinine
Sucrose	mmol/l & ratio to creatinine
Trans-aconitate	mmol/l & ratio to creatinine
Xanthosine	mmol/l & ratio to creatinine
Xylose	mmol/l & ratio to creatinine
Fluid balance	
Creatinine	mmol/l

Glycolysis related metabolites	
cis-Aconitate	mmol/l & ratio to creatinine
Citrate	mmol/l & ratio to creatinine
Glucose	mmol/l & ratio to creatinine
Lactate	mmol/l & ratio to creatinine
Ketone bodies	
Acetate	mmol/l & ratio to creatinine
Microbial metabolism	
3-Hydroxyhippurate	mmol/l & ratio to creatinine
Dimethylamine	mmol/l & ratio to creatinine
Trimethylamine N-oxide	mmol/l & ratio to creatinine
Miscellaneous	
2-Hydroxyisobutyrate	mmol/l & ratio to creatinine
3-Hydroxyisobutyrate	mmol/l & ratio to creatinine
3-Hydroxyisovalerate	mmol/l & ratio to creatinine
4-Deoxyerythronic acid	mmol/l & ratio to creatinine
4-Deoxythreonate	mmol/l & ratio to creatinine
4-Hydroxyhippurate	mmol/l & ratio to creatinine
Allantoin	mmol/l & ratio to creatinine
Ethanolamine	mmol/l & ratio to creatinine
Formate	mmol/l & ratio to creatinine
Glycolate	mmol/l & ratio to creatinine
Hypoxanthine	mmol/l & ratio to creatinine
Indoxyl Sulfate	mmol/l & ratio to creatinine
Pseudouridine	mmol/l & ratio to creatinine
Pyroglutamate	mmol/l & ratio to creatinine
Urea	mmol/l & ratio to creatinine

Nicotinate and nicotinamide metabolism	
1-Methylnicotinamide	mmol/l & ratio to creatinine
Trigonelline	mmol/l & ratio to creatinine
Phenylalanine metabolism	
Hippurate	mmol/l & ratio to creatinine
Pyrimidine metabolism	
3-Aminoisobutyrate	mmol/l & ratio to creatinine
Uracil	mmol/l & ratio to creatinine

[1] Preliminary biomarkers

ABOUT US

Nightingale Health Plc 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 CSF Biomarker Analysis Service
Nightingale Blood Analysis Service
Nightingale Cord Blood Biomarker Analysis Service

Nightingale Health