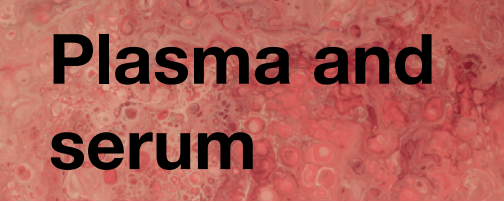
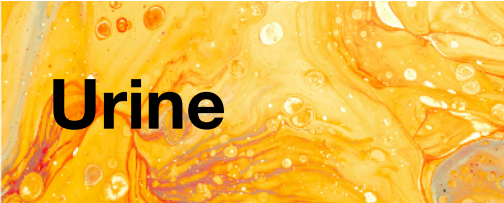

Biosfer Teslab



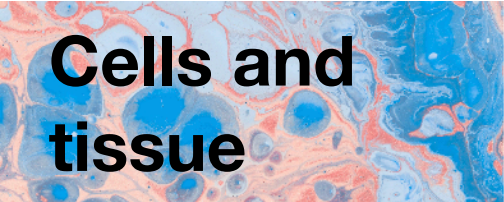
**Plasma and
serum**



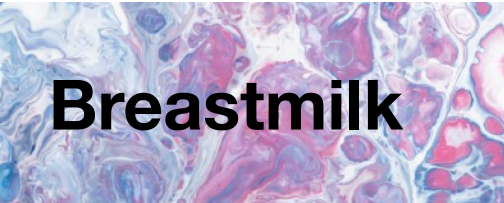
Urine



Feces



**Cells and
tissue**



Breastmilk

Metabolomics Services

Metabolomic Platform

Advanced technology

Nuclear Magnetic Resonance (NMR) is a valuable tool for studying the metabolic profile of an individual.

Robust and reproducible results

Results are reported in quantitative values and can be compared with different studies over time.

Quick analysis

Fully automated technology platform providing rapid analysis of up to 200 samples in one day.

The added value we offer

Quality results

Biosfer Teslab is ISO 9001 and ISO 13485 certified and CE marked for characterizing blood lipoproteins.

Experience

Our research team will help you to interpret your data. We are closely involved in every project.

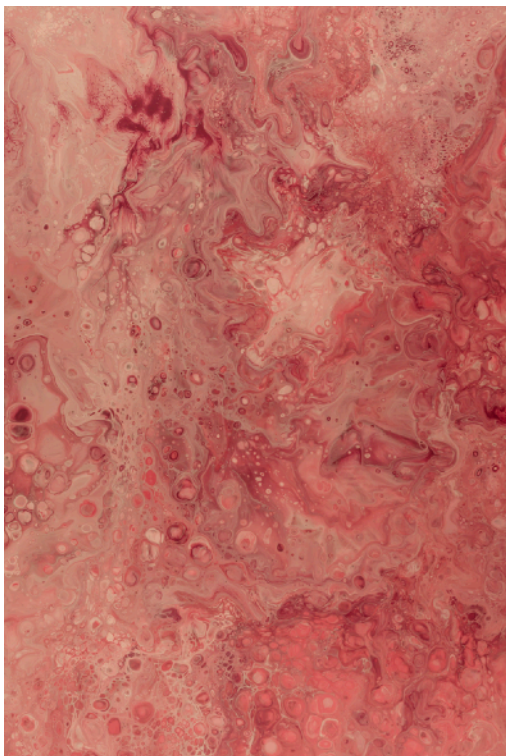
Data analysis

We have population databases that can be used to compare normality values. We participate in the creation of figures.

Applications

- Identification of biomarkers
- Epidemiological studies
- Pharmacological studies
- Nutritional studies
- Disease prediction and prevention
- Disease diagnosis
- Clinical trials
- Cardiovascular risk assessment

Plasma and serum



Shipping requirements

Specimen: serum or plasma

Volume: 250 µL

Conservation: samples frozen at -80°C

Liposcale® Test

Cholesterol

Total cholesterol
Remnant cholesterol
Non-HDL cholesterol
VLDL cholesterol
IDL cholesterol
LDL cholesterol
HDL cholesterol

Triglycerides

Total triglycerides
VLDL triglycerides
IDL triglycerides
LDL triglycerides
HDL triglycerides

VLDL lipoprotein particle number

Large VLDL particle number
Medium VLDL particle number
Small VLDL particle number

LDL lipoprotein particle number

Large LDL particle number
Medium LDL particle number
Small LDL particle number

HDL lipoprotein particle number

Large HDL particle number
Medium HDL particle number
Small HDL particle number

Particle size

VLDL size
LDL size
HDL size

Inflammation

NMR signal GlycA
NMR signal GlycB
NMR signal GlycF
Ratio H/W Glyc-A
Ratio H/W Glyc-A

Low molecular weight metabolites

Aminoacids

Glutamate
Histidine
Glycine
Alanine
Glutamine
Leucine
Valine
Isoleucine
Phenylalanine
Tyrosine

Glucose metabolism

Glucose
Lactate
Citrate
Glycerol

Renal function

Creatine
Creatinine

Ketone bodies

3-Hydroxyisobutyric acid
Acetate
Acetone

Lipids

Fatty acids

Saturated fatty acids
Polyunsaturated fatty acids
Linoleic fatty acid
Docosahexaenoic fatty acid
Arachidonic fatty acid
Eicosapentaenoic fatty acid
Omega 3
Omega 6 and 7
Omega 9

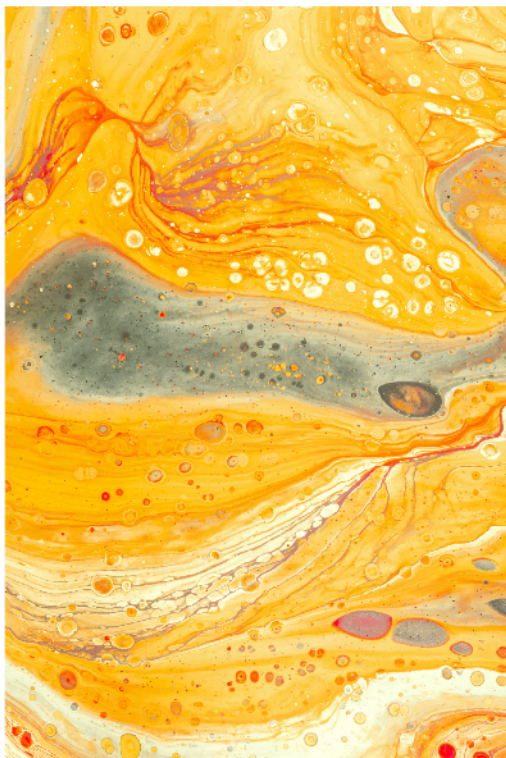
Cholesterol

Free cholesterol
Esterified cholesterol

Glycerides

Phosphoglycerides
Lysophosphatidylcholine
Phosphatidylcholine
Sphingomyelin

Urine



List of metabolites

Renal function

Creatine
Creatinine
Urea

Amino acids

Lysine
Alanine
Glycine
Histidine
Glutamine
Threonin
Taurine
Valine
Leucine
Isoleucine

Microbial Metabolism

TMAO
Dimethylamine

Glucose Metabolism *

Glucose
Lactate
Citrate
Succinate

Diet Metabolism *

Mannitol
3-methylhistidine
Arabinose
Betaine

Ketone bodies

Acetate

Phenylalanine metabolism

Hippurate

Pyrimidine metabolism

3-aminoisobutyric acid

Nicotinamide metabolism

Trigonelline
1-methylnicotinamide

Others *

Indoxyl sulfate
3-hydroxyisovalerate
2-hydroxyisobutyrate
3-hydroxyisobutyrate
Trans-aconitate
Ethanolamine
Formate
Allantoin
Hypoxanthine
Glycolate
Isocaproate
Carnitine
Isovalerate

Shipping requirements

Specimen: urine samples

Volume: > 300 µL

Conservation: samples frozen at -80°C

* The presence of some metabolites in urine samples can vary according to the person and the animal model, and some metabolites not present in the list may be analyzed or vice versa.

Feces



List of metabolites

Short chain fatty acids

Formate
Propionate
Valerate
Acetate
Butyrate
Isobutyrate
Isovalerate

Amino acids *

Lysine
Alanine
Glycine
Glutamate
Methionine
Tyrosine
Phenylalanine
Valine
Leucine
Isoleucine

Microbial metabolism *

TMAO
Dimethylamine

Glucose metabolism *

Glucose
Lactate
Succinate

Diet metabolism *

Xylose
Galactose

Pyrimidine metabolism *

Uracil
Uridine

Purine metabolism *

Oxypurinol
Hypoxanthine
Inosine
2-deoxyinosine

Others *

Creatine
Creatinine
Malonate
Choline
3-phenylpropionate

Shipping requirements

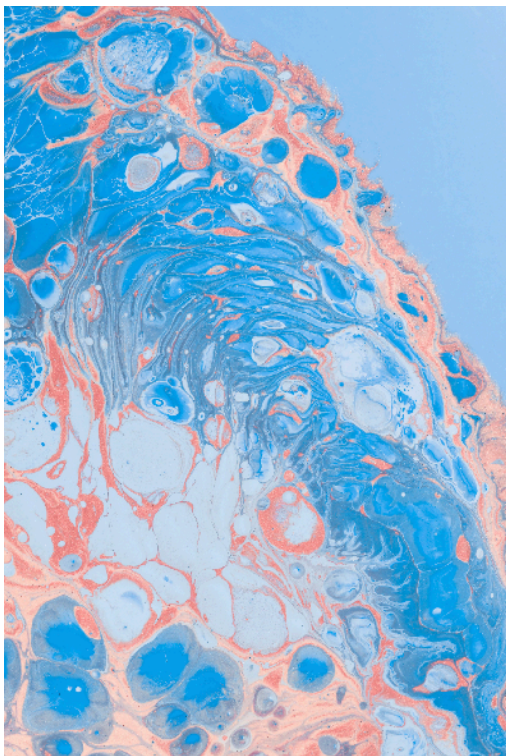
Specimen: fecal samples

Volume: 15-20 mg dry weight

Conservation: samples frozen at -80°C

* The presence of some metabolites in fecal samples can vary according to the person and the animal model, and some metabolites not present in the list may be analyzed or vice versa.

Cells and tissues



Cell culture *

Amino acids

Lysine
Alanine
Glutamate
Glutamine
Glycine
Tyrosine
Histidine
Phenylalanine
Valine
Leucine
Isoleucine

Glucose metabolism

Glucose
Lactate
NAD+
Fumarate
Myo-inositol

Purine metabolism

AMP
ADP
ATP
Inosine
Adenosine

Pyrimidine metabolism

Uridine
UDPg

Others

Acetate
Creatine
Cholines
Glutathione
Formate
1-methyl nicotinate
O-phosphocholine
sn-3-glycerophosphocholine

Tissues *

Amino acids

Valine
Leucine
Isoleucine
Alanine
Lysine
Phenylalanine
Methionine
Taurine
Glutamate
Glutamine
Glycine
Tyrosine

Glucose Metabolism

Glucose
Lactate
Succinate
Pyruvate
Fumarate

Others

Cholines
Creatine
Creatinine
ATP
ADP
AMP
NAD

Ketone bodies

Acetate
3-hydroxybutyrate

Cholesterol

Free cholesterol
Esterified cholesterol

Fatty acids

Saturated fatty acids
Polyunsaturated fatty acids
Linoleic fatty acid
Docosahexaenoic fatty acid
Arachidonic fatty acid
Eicosapentaenoic fatty acid
Omega 3
Omega 6 and 7
Omega 9

Glycerides and phospholipids

Triglycerides
Phosphoglycerides
Lysophosphatidylcholine
Phosphatidylcholine
Phosphatidylinositol
Phosphatidylethanolamine
Sphingomyelin
Plasmalogen

Shipping requirements

Specimen: tissues / cell culture / cell media

Tissues: 25-50 mg pulverized dried tissue

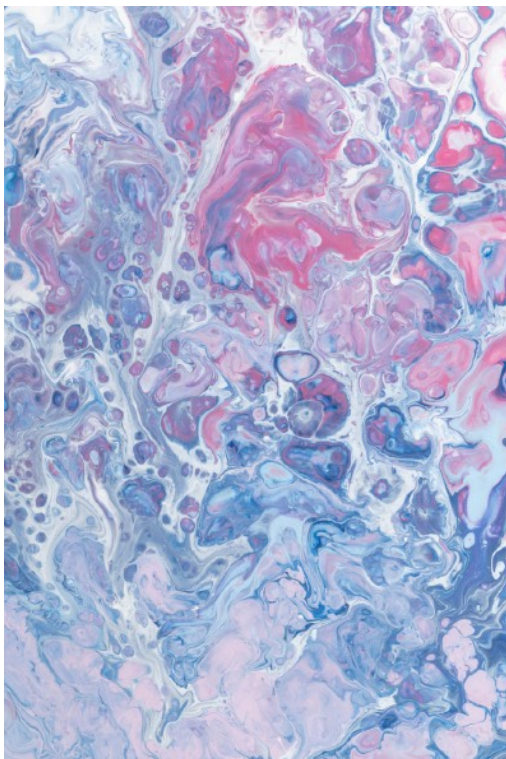
Cell cultures: 5-10 million cells

Cell media: 200 µL

Conservation: samples frozen at -80°C

* These lists show an example of metabolites present in cell cultures and liver tissue. The list of metabolites analyzed will vary depending on the type of tissue and cell line.

Breastmilk



Shipping requirements

Specimen: breastmilk

Volume: 1 mL

Conservation: samples frozen at -80°C

Low molecular weight metabolites *

Aminoacids

Alanine
Alloisoleucine
Glutamate
Glutamine
Isoleucine
Leucine
Threonine
Valine

Energy metabolism

Citrate
Glucose
Glycerol
Lactate
Lactose
Succinate
2-Oxoglutarate

Renal function

Creatine
Creatine phosphate
Creatinine

Ketone bodies

Acetate
Acetone

Others

Cadaverine
Choline
Formate
O-Phosphocholine
Sn-Glycero-3-phosphocholine

Lipids *

Fatty acids

Docosahexaenoic acid (DHA)
Linoleic acid (LA)
Polyunsaturated fatty acids (PUFAs)
Polylactic acid (PLA)

Cholesterol

Esterified cholesterol
Free cholesterol
Total cholesterol

Glycerides

Lysophosphatidylcholine (LPC)
Phosphatidylcholine (PC)
Phosphatidylethanolamine (PE)
Sphingomyelins (SM)
Triglycerides (TG)

* These lists provide examples of low molecular weight metabolites and lipids commonly found in breastmilk. Please note that the identified metabolites may vary depending on the samples analyzed.