PATHWAY	DESCRIPTION	VOLUME
One-carbon metabolism	Quantification of metabolites in folate cycle, methione cycle, choline metabolism and transsulfuration pathway by LC-MS	2x10(6) cells/50 mg tissues
Central carbon metabolism	Quantification of glucose, sugar phosphates, CoAs, enzyme co-factors, TCA cycle carboxylic acids, phosphocarboxylic acids and 9 major nucleotides involved in Central Carbon Metabolism (CCM) by UPLC-MRM/MS	2x10(6) cells/50 mg tissues
Amino acid metabolism	Quantitation of amino acids, amines and selected metabolic intermediates	50 µL plasma/serum, 2x10(6) cells, 2x10(5) neurons or 50 mg tissues
Sphingolipid pathway-precursors, intermediates and end-product sphingolipids	Quantification of sphingolipid biosynthesis intermediates, sphinganines, ceramides, sphingomyelins and selected gangliosides by UPLC-MRM/MS	50 µL plasma/serum, 2x10(6) cells, 2x10(5) neurons or 50 mg tissues
Mevalonate pathway and isoprenoids/cholesterol synthesis	Detection and quantitation of all known isoprenyl phosphate intermediates, isoprenoids (ubiquinones, dolichols, vitain K2 and squalene, etc.), cholesterol and other sterols by UPLC-MRM/MS and UPLC-FTMS	50 mg tissues, 1x10(7) cells
Fatty acid metabolism - medium- to long-chain fatty acids and carnitines analysis	Simultaneous quantification of medium- to long-chain fatty acids and acyl-carnitines by UPLC-MRM/MS	50 µL plasma/serum, 2x10(6) cells, 2x10(5) neurons or 50 mg tissues
Purine-pyrimidine metabolism pathway	Identification & quantification of nucleotides, nucleobases and nucleosides by UPLC-MRM/MS	200 µL urine, 50 mg tissues, 1x10(7) cells
In vivo metabolites of vitamin co-metabolism	Quantification of in vivo vitamins and metabolites of host-gut co-metabolism by UPLC-MRM/MS	100 µL plasma/serum or 100 mg tissues