Supplementary Table S2. List of enriched pathways for the 2D-GC-ToF-MS–based quantified metabolites. P-values and Impact scores of the pathways are provided.

Pathway Name	p-value	Impact
Aminoacyl-tRNA biosynthesis	2.01E-08	0.22536
Nitrogen metabolism	1.88E-05	0.07895
Arginine and proline metabolism	4.99E-04	0.56037
Alanine, aspartate and glutamate metabolism	0.0011277	0.75119
Phenylalanine metabolism	0.0018896	0.24437
Glutathione metabolism	0.0029524	0.03761
Cyanoamino acid metabolism	0.007972	0
Glycine, serine and threonine metabolism	0.01114	0.47012
Valine, leucine and isoleucine biosynthesis	0.011562	0.04717
beta-Alanine metabolism	0.013498	0.19919
D-Glutamine and D-glutamate metabolism	0.016963	0.13904
Galactose metabolism	0.018147	0.05185
Fatty acid biosynthesis	0.040182	0
D-Arginine and D-ornithine metabolism	0.061872	0
Taurine and hypotaurine metabolism	0.0833	0.36331
Pyrimidine metabolism	0.090614	0.03553
Lysine degradation	0.096103	0.22692
Propanoate metabolism	0.10723	0.00279
Butanoate metabolism	0.15397	0.04339
Phenylalanine, tyrosine and tryptophan biosynthesis	0.16489	0.008
Pantothenate and CoA biosynthesis	0.16489	0.02002
Cysteine and methionine metabolism	0.16635	0.06292
Glycolysis or Gluconeogenesis	0.21905	4.60E-04
Pentose phosphate pathway	0.23314	0.09801
Lysine biosynthesis	0.23314	0.12154
Sulfur metabolism	0.24218	0.03307
Methane metabolism	0.26177	0.01751
Starch and sucrose metabolism	0.26442	0.11872
Glyoxylate and dicarboxylate metabolism	0.26442	0.36043
Citrate cycle (TCA cycle)	0.28188	0.07773
Caffeine metabolism	0.3017	0
Selenoamino acid metabolism	0.32142	0.00321
Valine, leucine and isoleucine degradation	0.34944	0.02232
Purine metabolism	0.35001	0.02452
Thiamine metabolism	0.36043	0
Biotin metabolism	0.44717	0
Primary bile acid biosynthesis	0.45022	0.07168
Fatty acid metabolism	0.4916	0.02959
Vitamin B6 metabolism	0.50603	0.11174
Glycerolipid metabolism	0.50603	0.20907
Ubiquinone and other terpenoid-quinone biosynthesis	0.57049	6.90E-04
Riboflavin metabolism	0.67824	0
Nicotinate and nicotinamide metabolism	0.68066	0
Histidine metabolism	0.68066	5.10E-04
Amino sugar and nucleotide sugar metabolism	0.68721	0.01122
Ascorbate and aldarate metabolism	0.6927	0.1143
Sphingolipid metabolism	0.74105	0
Fatty acid elongation in mitochondria	0.76772	0
alpha-Linolenic acid metabolism	0.79167	0.20335
Pyruvate metabolism	0.82308	0.09947
Glycerophospholipid metabolism	0.87926	0.05562
Inositol phosphate metabolism	0.87926	0.13703
Tyrosine metabolism	0.91607	0.04724
Porphyrin and chlorophyll metabolism	0.91857	0
Fructose and mannose metabolism	0.92625	0.02948
Tryptophan metabolism	0.9266	0.15633
Pentose and glucuronate interconversions	0.94396	0.02091
Arachidonic acid metabolism	0.96588	0.21669
Metabolism of xenobiotics by cytochrome P450	0.97109	0
Steroid hormone biosynthesis	0.99565	0.00391