Supplementary Table S1.

Level1	Level2	Abundance
Biosynthesis	Amine and Polyamine Biosynthesis	1259.22
Biosynthesis	Amino Acid Biosynthesis	37395.36
Biosynthesis	Aminoacyl-tRNA Charging	1045.93
Biosynthesis	Aromatic Compound Biosynthesis	2568.08
Biosynthesis	Carbohydrate Biosynthesis	12763.53
Biosynthesis	Cell Structure Biosynthesis	7804.44
Biosynthesis	Cofactor, Prosthetic Group, Electron Carrier, and Vitamin Biosynthesis	36867.21
Biosynthesis	Fatty Acid and Lipid Biosynthesis	18608.9
Biosynthesis	Metabolic Regulator Biosynthesis	243.36
Biosynthesis	Nucleoside and Nucleotide Biosynthesis	33728.57
Biosynthesis	Other Biosynthesis	492.66
Biosynthesis	Secondary Metabolite Biosynthesis	5779.96
Degradation/Utilization/Assimilation	Alcohol Degradation	303.13
Degradation/Utilization/Assimilation	Aldehyde Degradation	4.69
Degradation/Utilization/Assimilation	Amine and Polyamine Degradation	1692.01
Degradation/Utilization/Assimilation	Amino Acid Degradation	3067.54
Degradation/Utilization/Assimilation	Aromatic Compound Degradation	3255.52
Degradation/Utilization/Assimilation	C1 Compound Utilization and Assimilation	4663.1
Degradation/Utilization/Assimilation	Carbohydrate Degradation	5249.89
Degradation/Utilization/Assimilation	Carboxylate Degradation	3925.35
Degradation/Utilization/Assimilation	Chlorinated Compound Degradation	15.85
Degradation/Utilization/Assimilation	Cofactor, Prosthetic Group, Electron Carrier Degradation	0.17
Degradation/Utilization/Assimilation	Degradation/Utilization/Assimilation - Other	289.55
Degradation/Utilization/Assimilation	Fatty Acid and Lipid Degradation	1631.67
Degradation/Utilization/Assimilation	Inorganic Nutrient Metabolism	3378.69
Degradation/Utilization/Assimilation	Nucleoside and Nucleotide Degradation	7408.49
Degradation/Utilization/Assimilation	Polymeric Compound Degradation	1897.23
Degradation/Utilization/Assimilation	Secondary Metabolite Degradation	2828.81
Detoxification	Antibiotic Resistance	261
Detoxification	methanol oxidation to carbon dioxide	201.75
Generation of Precursor Metabolite and Energy	1,5-anhydrofructose degradation	21.42
Generation of Precursor Metabolite and Energy	Electron Transfer	3827.39
Generation of Precursor Metabolite and Energy	Entner-Duodoroff Pathways	55.63
Generation of Precursor Metabolite and Energy	ethylmalonyl-CoA pathway	132.68
Generation of Precursor Metabolite and Energy	Fermentation	10640.21
Generation of Precursor Metabolite and Energy	formaldehyde oxidation I	170.99
Generation of Precursor Metabolite and Energy	Glycolysis	3882.9
Generation of Precursor Metabolite and Energy	glyoxylate cycle	842.34
Generation of Precursor Metabolite and Energy	isopropanol biosynthesis	108.18
Generation of Precursor Metabolite and Energy	methyl ketone biosynthesis	504.05
Generation of Precursor Metabolite and Energy	methylaspartate cycle	175.14
Generation of Precursor Metabolite and Energy	Pentose Phosphate Pathways	2898.55
Generation of Precursor Metabolite and Energy	Photosynthesis	1792.47
Generation of Precursor Metabolite and Energy	Respiration	3992.3
Generation of Precursor Metabolite and Energy	superpathway of glycolysis and Entner-Doudoroff	1103.58
Generation of Precursor Metabolite and Energy	superpathway of glycolysis, pyruvate dehydrogenase, TCA, and glyoxylate bypass	1041.83
Generation of Precursor Metabolite and Energy	TCA cycle	8327.52
Glycan Pathways	Glycan Biosynthesis	1001.14
Glycan Pathways	Glycan Degradation	1029.35
Macromolecule Modification	Nucleic Acid Processing	1351.39
Metabolic Clusters	L-glutamate and L-glutamine biosynthesis	597.65
Metabolic Clusters	O-antigen building blocks biosynthesis (E. coli)	1230.1
Metabolic Clusters	phospholipases	23.6
Metabolic Clusters	pyrimidine deoxyribonucleotide phosphorylation	1200.45
Metabolic Clusters	pyrimidine deoxyribonucleotides biosynthesis from CTP	1.59
Metabolic Clusters	pyrimidine deoxyribonucleotides de novo biosynthesis I	1092.32
Metabolic Clusters	pyrimidine deoxyribonucleotides de novo biosynthesis III	756.91
Metabolic Clusters	pyrimidine deoxyribonucleotides de novo biosynthesis IV	0.97
Metabolic Clusters	superpathway of L-aspartate and L-asparagine biosynthesis	295.26
Metabolic Clusters	tRNA charging	1045.93