**Table S1. The list of microbial metabolites extracted from stool samples**

|  |  |  |
| --- | --- | --- |
| Number | Class | Name |
| 1 | Alkylamines | Phenylethylamine |
| 2 | Alkylamines | Putrescine |
| 3 | Amino Acids | 2-Hydroxybutyric acid |
| 4 | Amino Acids | 2-Phenylglycine |
| 5 | Amino Acids | 3-Aminoisobutanoic acid |
| 6 | Amino Acids | 5-Hydroxy-L-tryptophan |
| 7 | Amino Acids | Aminoadipic acid |
| 8 | Amino Acids | Beta-Alanine |
| 9 | Amino Acids | D-2-Hydroxyglutaric acid |
| 10 | Amino Acids | Gamma-Aminobutyric acid |
| 11 | Amino Acids | Glutathione |
| 12 | Amino Acids | Glycine |
| 13 | Amino Acids | Homocysteine |
| 14 | Amino Acids | L-Alanine |
| 15 | Amino Acids | L-Alpha-aminobutyric acid |
| 16 | Amino Acids | L-Asparagine |
| 17 | Amino Acids | L-Aspartic acid |
| 18 | Amino Acids | L-Cystine |
| 19 | Amino Acids | L-Glutamic acid |
| 20 | Amino Acids | L-Histidine |
| 21 | Amino Acids | L-Homoserine |
| 22 | Amino Acids | L-Isoleucine |
| 23 | Amino Acids | L-Kynurenine |
| 24 | Amino Acids | L-Leucine |
| 25 | Amino Acids | L-Lysine |
| 26 | Amino Acids | L-Methionine |
| 27 | Amino Acids | L-Norleucine |
| 28 | Amino Acids | L-Phenylalanine |
| 29 | Amino Acids | L-Proline |
| 30 | Amino Acids | L-Serine |
| 31 | Amino Acids | L-Tryptophan |
| 32 | Amino Acids | L-Tyrosine |
| 33 | Amino Acids | L-Valine |
| 34 | Amino Acids | N-acetyltryptophan |
| 35 | Amino Acids | Norvaline |
| 36 | Amino Acids | Ornithine |
| 37 | Amino Acids | Pipecolic acid |
| 38 | Amino Acids | Pyroglutamic acid |
| 39 | Amino Acids | Salicyluric acid |
| 40 | Cinmic acids | Cinnamic acid |
| 41 | Fatty Acids | 3-Hydroxyisovaleric acid |
| 42 | Fatty Acids | 5-Dodecenoic acid |
| 43 | Fatty Acids | 8,11,14-Eicosatrienoic acid |
| 44 | Fatty Acids | Alpha-Linolenic acid |
| 45 | Fatty Acids | Arachidic acid |
| 46 | Fatty Acids | Arachidonic acid |
| 47 | Fatty Acids | Behenic acid |
| 48 | Fatty Acids | Butyric acid |
| 49 | Fatty Acids | Capric acid |
| 50 | Fatty Acids | Caproic acid |
| 51 | Fatty Acids | Caprylic acid |
| 52 | Fatty Acids | Docosahexaenoic acid |
| 53 | Fatty Acids | Docosapentaenoic acid n6 |
| 54 | Fatty Acids | Docosatrienoic acid |
| 55 | Fatty Acids | Dodecanoic acid |
| 56 | Fatty Acids | Eicosenoic acid |
| 57 | Fatty Acids | Heptadecanoic acid |
| 58 | Fatty Acids | Heptanoic acid |
| 59 | Fatty Acids | Isobutyric acid |
| 60 | Fatty Acids | Isovaleric acid |
| 61 | Fatty Acids | Linoleic acid |
| 62 | Fatty Acids | Methylsuccinic acid |
| 63 | Fatty Acids | Myristic acid |
| 64 | Fatty Acids | Nervonic acid |
| 65 | Fatty Acids | Nonadecanoic acid |
| 66 | Fatty Acids | Palmitic acid |
| 67 | Fatty Acids | Palmitoleic acid |
| 68 | Fatty Acids | Pelargonic acid |
| 69 | Fatty Acids | Pentadecanoic acid |
| 70 | Fatty Acids | Propionic acid |
| 71 | Fatty Acids | Stearic acid |
| 72 | Fatty Acids | Tetracosanoic acid |
| 73 | Fatty Acids | Valeric acid |
| 74 | Hydroxy acids | Alpha-Hydroxyisobutyric acid |
| 75 | Indoles | 1H-Indole-3-acetamide |
| 76 | Indoles | 3-Indolepropionic acid |
| 77 | Indoles | 3-Methylindole |
| 78 | Indoles | Indole |
| 79 | Indoles | Indoleacetic acid |
| 80 | Indoles | Melatonin |
| 81 | Keto acids | Oxoadipic acid |
| 82 | Nitriles | 3-Indoleacetonitrile |
| 83 | Nucleotide | Purine |
| 84 | Organic Acids | 3-Hydroxybutyric acid |
| 85 | Organic Acids | 3-Hydroxyphenylacetic acid |
| 86 | Organic Acids | 3-Methyl-2-oxovaleric acid |
| 87 | Organic Acids | 4-Hydroxybenzoic acid |
| 88 | Organic Acids | 4-Hydroxycinnamic acid |
| 89 | Organic Acids | 4-Hydroxyphenylpyruvic acid |
| 90 | Organic Acids | Adipic acid |
| 91 | Organic Acids | Citraconic acid |
| 92 | Organic Acids | Citramalic acid |
| 93 | Organic Acids | Citric acid |
| 94 | Organic Acids | Erucic acid |
| 95 | Organic Acids | Fumaric acid |
| 96 | Organic Acids | Glutaric acid |
| 97 | Organic Acids | Glyceric acid |
| 98 | Organic Acids | Glycolic acid |
| 99 | Organic Acids | Hippuric acid |
| 100 | Organic Acids | Hydrocinnamic acid |
| 101 | Organic Acids | Hydroxyphenyllactic acid |
| 102 | Organic Acids | Hydroxypropionic acid |
| 103 | Organic Acids | Isocitric acid |
| 104 | Organic Acids | Itaconic acid |
| 105 | Organic Acids | Malic acid |
| 106 | Organic Acids | Malonic acid |
| 107 | Organic Acids | Nicotinic acid |
| 108 | Organic Acids | Ortho-Hydroxyphenylacetic acid |
| 109 | Organic Acids | Oxalic acid |
| 110 | Organic Acids | Oxoglutaric acid |
| 111 | Organic Acids | Phenylacetic acid |
| 112 | Organic Acids | Phenyllactic acid |
| 113 | Organic Acids | Pimelic acid |
| 114 | Organic Acids | Suberic acid |
| 115 | Organic Acids | Succinic acid |
| 116 | Organic Acids | Tartaric acid |
| 117 | Organic Acids | Vanillic acid |
| 118 | Organic Acids | cis-Aconitic acid |
| 119 | Organic Acids | p-Hydroxyphenylacetic acid |
| 120 | Others | 2-Phenylpropionate |
| 121 | Others | 2-methyl-Butyric acid |
| 122 | Others | 3-3-Hydroxyphenyl-3-hydroxypropanoic acid |
| 123 | Others | Acetic acid |
| 124 | Others | m-Hydroxyhippuric acid |

A total of 124 microbial metabolites in 10 classes extracted from stool samples were quantified in the present study. The table shows the list of microbial metabolites.