| Pathway                          | POS          |        |        | Pathway                          | NEG          |        |        |
|---------------------------------|--------------|--------|--------|---------------------------------|--------------|--------|--------|
| Aminoacyl-tRNA biosynthesis     | 67           | 9      | 0.01652| Aminoacyl-tRNA biosynthesis     | 67           | 10     | 0.010068|
| PRM                             |              |        |        | Taurine and hypotaurine         | 5            | 2      | 0.037775|
|                                 |              |        |        | metabolism                      |              |        |        |
| Aminoacyl-tRNA biosynthesis     | 67           | 9      | 0.01652| Aminoacyl-tRNA biosynthesis     | 67           | 11     | 0.012337|
| Cd                              |              |        |        | Alanine, aspartate and          | 22           | 5      | 0.024123|
|                                 |              |        |        | glutamate metabolism            |              |        |        |
| Butanoate metabolism           | 18           | 4      | 0.046332|                                 |              |        |        |
| Purine metabolism              | 61           | 8      | 0.026919| Aminoacyl-tRNA biosynthesis     | 67           | 10     | 0.0017023|
| N-                              |              |        |        |                                 |              |        |        |
| Nitrogen metabolism            | 15           | 3      | 0.048602| Taurine and hypotaurine         | 5            | 2      | 0.024079|
|                                 |              |        |        | metabolism                      |              |        |        |
| Pantothenate and CoA biosynthesis| 14           | 3      | 0.032429|                                 |              |        |        |
| Nitrogen metabolism            | 15           | 3      | 0.039058|                                 |              |        |        |
| Pyrimidine metabolism          | 38           | 5      | 0.043252|                                 |              |        |        |