**Supplementary File1**

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| --- | --- | --- | --- | --- |
| SRA ID | Sequencing platform and  number of spots; average read length | Taxon | Note | File name |
| SRR292150 | 454 GS 20 (183203;110.31) | Staphylococcus aureus subsp. aureus USA300\_TCH959 (NCBI taxon id: 450394) | Randomly selected | 454\_100000sample.zip |
| ERR236069 | Ion Torrent PGM (1338465;262.05) | Staphylococcus aureus (NCBI taxon id: 1280) | Randomly selected | iontorrent\_100000sample.zip |
| SRR017390 | Illumina Genome Analyzer II (26391487;76) | Staphylococcus aureus subsp. aureus 67-331 (NCBI taxon id: 585131) | Randomly selected | illumine\_100000sample.zip |
| DRR000184 | Illumina Genome Analyzer II (7631281;50) | Bacillus anthracis BA104 (NCBI taxon id: Not Available) | Randomly selected | anthrax\_100000sample.zip |

Table S1. List of files used for comparison