

**Table S2:** Time taken by different binning methods for taxonomic assignment of reads constituting the simulated ‘Roche’ and ‘Illumina short-clones’ datasets.

| <b>Method</b>     | <b>Total time taken for taxonomic assignments (in mins) *</b> |  |
|-------------------|---|--|
|                   | <b>Roche Dataset</b>  | <b>Illumina 'short-clones' Dataset</b> |
| Megan             | 1292  | 1060                                   |
| Megan-Paired      | -   | 1145                                   |
| Megan + SI        | -   | 1063                                   |
| Discribinate      | 1296  | 1061                                   |
| Discribinate + SI | -   | 1064                                   |
| Sort-items        | 1352  | 1080                                   |
| Sort-items + SI   | -   | 1083                                   |
| Sphinx            | 68  | 40                                     |
| Sphinx + SI       | -   | 42                                     |
| Twarit            | 16  | 12                                     |
| Twarit + SI       | -   | 15                                     |
| Indus             | 64  | 36                                     |
| Indus + SI        | -   | 39                                     |

\* Processing times of strategies SI, SII, SIII and SIV are equivalent. On a similar note, the processing time required for the ‘short clones’ and the ‘long clones’ dataset are also equivalent.