|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Time (h)** | **Shaker** **200 rpm** | **Stirred tank** **0.1 vvm** | **Bubble****0.1 vvm** | **Internal loop airlift** **0.1 vvm** |
| **Biomass** | **Reducing sugar** | **Biomass** | **Reducing sugar** | **Biomass** | **Reducing sugar** | **Biomass** | **Reducing sugar** |
| 0 | 1.38 ± 0.04  | 62.28 ± 0.42 | 1.33 ± 0.04 | 62.74 ± 1.52 | 1.38 ± 0.11 | 61.24 ± 1.03 | 1.33 ± 0.53 | 61.16 ± 0.56 |
| 24 | 7.78 ± 0.32 | 51.79 ± 0.18 | 2.40 ± 0.17 | 52.04 ± 0.04 | 1.53 ± 0.18 | 51.19 ± 0.04 | 1.63 ± 0.11 | 51.74 ± 0.04 |
| 48 | 19.65 ± 2.90 | 49.65 ± 0.02 | 12.50 ± 0.85 | 50.56 ± 0.36 | 4.35 ± 0.78 | 51.37 ±0.07  | 6.86 ± 0.20 | 51.52 ± 0.13 |
| 72 | 22.35 ± 3.89 | 47.51 ± 1.68 | 25.00 ± 0.99 | 49.57 ± 0.46 | 4.77 ± 0.02 | 51.42 ± 0.14 | 16.20 ± 0.42 | 50.33 ± 0.78 |
| 96 | 24.40 ± 0.85 | 25.51 ± 0.07 | 23.91 ± 1.43 | 25.78 ± 0.43 | 7.70 ± 0.71 | 50.99 ± 0.25 | 21.40 ± 0.84 | 35.17 ± 0.40 |
| 120 | 24.08 ± 4.84 | 13.51 ± 0.21 | 23.30 ± 1.27 | 13.76 ± 0.79 | 21.15 ± 1.48 | 53.53 ± 0.12 | 23.41 ± 0.29 | 25.63 ± 0.28 |
| 144 | 22.35 ± 1.06 | 13.28 ± 0.22 | 21.80 ± 0.28  | 13.83 ± 0.71 | 19.90 ± 0.99 | 45.78 ± 0.08 | 21.75 ± 0.07 | 13.72 ± 0.84 |
| 168 | 22.00 ± 0.85 | 13.19 ± 0.05 | 18.50 ± 0.99 | 13.51 ± 0.18 | 16.55 ± 1.48 | 38.42 ± 0.06 | 16.50 ± 0.42 | 13.88 ± 0.79 |