**Table S1.** The isobutanol yield relative to the maximum theoretical yields (%) for ZMQ3-A2, ZMQ3-A3, and ZMQ3-A4 strains with the induction of tetracycline at concentrations of 0, 0.2 and 1.0 μg/mL (Tc 0, Tc 0.2, and Tc 1.0 respectively) was calculated based on the information of glucose consumed (**Gluc**) and the production of isobutanol (**Iso**) and ethanol (**Eth**) at the time point when most glucose was consumed up and the production of isobutanol and ethanol was the highest (**h**). **Theoretical Isobutanol Titer (g/L)** is the amount of isobutanol that can be produced from all glucose consumed, which was calculated based on the formula: ***Theoretical Isobutanol Titer****=Glucose Consumed /180.156 (MW of Glucose)\*74.122 (MW of Isobutanol).* Percentage of theoretical isobutanol maximum yield (Isobutanol yield, %) was then calculated based on the isobutanol produced/ Theoretical Isobutanol Titer\*100%.

|  |  |  |  |
| --- | --- | --- | --- |
| ZMQ3-A2  | Tc 0 | Tc 0.2 | Tc 1.0 |
| Time to Maximum Titer (h) | 23.00 | 23.00 | 23.00 |
| Glucose Consumed (g/L) | 46.98 ± 0.36 | 47.04 ± 0.21 | 46.91 ± 0.26 |
| Ethanol Produced (g/L) | 19.97 ± 0.02 | 20.11 ± 0.24 | 18.71 ± 0.17 |
| Isobutanol Produced (g/L) | 0.26 ± 0.01 | 0.32 ± 0.01 | 1.72 ± 0.02 |
| Theoretical Isobutanol Titer (g/L) | 19.33 ± 0.15 | 19.35 ± 0.09 | 19.3 ± 0.11 |
| Isobutanol yield (%) | 1.36 ± 0.06 | 1.65 ± 0.06 | **8.89 ± 0.11** |
|  |  |  |  |
| ZMQ3-A3 | Tc 0 | Tc 0.2 | Tc 1.0 |
| Time to Maximum Titer (h) | 23.00 | 23.00 | 59.00 |
| Glucose Consumed (g/L) | 47.12 ± 0.08 | 46.89 ± 0.32 | 47.15 ± 0.12 |
| Ethanol Produced (g/L) | 20.01 ± 0.05 | 17.49 ± 0.13 | 13.69 ± 0.03 |
| Isobutanol Produced (g/L) | 0.65 ± 0.04 | 3 ± 0.2 | 3.5 ± 0.04 |
| Theoretical Isobutanol Titer (g/L) | 19.38 ± 0.03 | 19.29 ± 0.13 | 19.4 ± 0.05 |
| Isobutanol yield (%) | 3.38 ± 0.19 | 15.56 ± 0.96 | **18.07 ± 0.23** |
|  |   |
| ZMQ3-A4 | 0 | 0.2 | 1 |
| Time to Maximum Titer (h) | 23.00 | 31.00 | 59.00 |
| Glucose Consumed (g/L) | 44.74 ± 0.1 | 44.19 ± 1.33 | 41.9 ± 3.19 |
| Ethanol Produced (g/L) | 18.57 ± 0.03 | 13.94 ± 0.55 | 10.93 ± 1 |
| Isobutanol Produced (g/L) | 0.88 ± 0.03 | 3.93 ± 0.18 | 3.93 ± 0.06 |
| Theoretical Isobutanol Titer (g/L) | 18.41 ± 0.04 | 18.18 ± 0.55 | 17.24 ± 1.31 |
| Isobutanol yield (%) | 4.78 ± 0.15 | 21.62 ± 1.38 | **22.88 ± 1.49** |