Additional file 2: Table S1. Physiological rates of K. marxianus strains from batch experiments on glucose at different temperatures. Depending on the strain, the cultivation temperature was varied between 30 °C and 49 °C in different experiments. µ - specific growth rate; rglucose – specific glucose uptake rate; rO2 – specific oxygen uptake rate; rglycerol – specific glycerol production rate; racetate – specific acetate production rate; rethanol – specific ethanol production rate; rCO2 – specific CO2 production rate.

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| --- | --- | --- | --- |
|  | *K. marxianus* CBS 712 | *K. marxianus* ATCC 748 | *K. marxianus* CBS 2080 |
|  | 30 °C | 37 °C | 40 °C | 45 °C | 30 °C | 37 °C | 40 °C | 47 °C | 30 °C | 37 °C | 40 °C | 45 °C | 47 °C |
| µ [h-1] | 0.48±0.01 | 0.68±0.01 | 0.71±0.02 | 0.40±0.01 | 0.63±0.02 | 0.79±0.01 | 0.94±0.02 | 0.17±0.00 | 0.39±0.01 | 0.69±0.01 | 0.93±0.01 | 0.53±0.01 | 0.28±0.01 |
| rglucose [mmol/gCDW/h] | 5.65±0.46 | 9.82±0.69 | 10.48±0.47 | 4.02±0.27 | 6.43±0.76 | 10.28±0.56 | 10.36±1.47 | 9.82±1.03 | 5.06±0.54 | 9.16±1.21 | 11.48±1.24 | 7.48±0.35 | 6.06±0.7 |
| rO2 [mmol/gCDW/h] | 12.94±0.52 | 14.78±1.45 | 15.49±3.03 | 7.17±1.51 | 12.45±0.72 | 11.66±2.3 | 25.38±2.41 | 5.67±0.2 | 8.25±0.28 | 17.63±2.11 | 41.72±6.05 | 11.37±1.44 | 9.08±0.87 |
| rglycerol [mmol/gCDW/h] | 0.56±0.04 | 1±0.14 | 1.59±0.08 | 0.49±0.04 | 0.55±0.07 | 0.93±0.05 | 0±0 | 1.12±0.11 | 0.31±0.03 | 0.76±0.09 | 0±0 | 0.23±0.23 | 0±0 |
| racetate [mmol/gCDW/h] | 0.7±0.05 | 2.31±0.18 | 0.8±0.81 | 0.16±0.16 | 0.52±0.07 | 0.52±0.03 | 0.63±0.06 | 0.48±0.06 | 1.79±0.17 | 1.84±0.19 | 1.75±0.18 | 0.91±0.04 | 1.74±0.22 |
| rethanol [mmol/gCDW/h] | 0±0 | 1.49±1.49 | 1.59±1.59 | 0±0 | 0±0 | 1.58±0.81 | 0±0 | 13.86±1.33 | 0±0 | 0±0 | 0±0 | 0.65±0.69 | 3.63±0.34 |
| rCO2 [mmol/gCDW/h] | 11.48±0.35 | 13.55±1.6 | 15.01±0.5 | 7.11±0.39 | 12.98±0.83 | 12.65±0.55 | 28.05±1.63 | 13.23±0.98 | 8.46±0.3 | 16.77±0.83 | 52.42±5.01 | 13.58±0.5 | 10.22±0.99 |

Additional file 2: Table S2. Physiological rates of O. polymorpha strains from batch experiments on glucose at different temperatures. Depending on the strain, the cultivation temperature was varied between 30 °C and 49 °C in different experiments. µ - specific growth rate; rglucose – specific glucose uptake rate; rO2 – specific oxygen uptake rate; rglycerol – specific glycerol production rate; racetate – specific acetate production rate; rethanol – specific ethanol production rate; rCO2 – specific CO2 production rate.

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| --- | --- | --- | --- |
|  | *O. polymorpha* KCTC 17233 | *O. polymorpha* CLIB 421 | *O. polymorpha* NCYC 495 |
|  | 30 °C | 37 °C | 40 °C | 45 °C | 47 °C | 45 °C | 47 °C | 30 °C | 37 °C | 40 °C | 45 °C | 47 °C | 49 °C |
| µ [h-1] | 0.39±0 | 0.42±0.01 | 0.44±0.01 | 0.59±0 | 0.44±0.02 | 0.52±0 | 0.39±0 | 0.44±0.02 | 0.46±0.03 | 0.48±0.01 | 0.36±0 | 0.3±0.01 | 0.2±0.01 |
| rglucose [mmol/gCDW/h] | 4.1±0.05 | 4.44±0.24 | 4.46±0.46 | 5.68±0.17 | 4.24±0.48 | 4.87±0.47 | 4.52±0.23 | 4.25±0.41 | 4.71±0.71 | 4.6±0.34 | 4.25±0.23 | 3.44±0.1 | 3.04±0.44 |
| rO2 [mmol/gCDW/h] | 7.97±0.17 | 7.79±1.56 | 8.23±1.12 | 11.71±1.01 | 8.8±2.58 | 10.28±1.22 | 11.69±2.51 | 6.17±2.42 | 9.55±0.66 | 9.64±1.96 | 9.62±1.31 | 9.08±0.44 | 9.38±2.34 |
| rglycerol [mmol/gCDW/h] | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 |
| racetate [mmol/gCDW/h] | 0±0 | 2.25±0.16 | 0.92±0.1 | 0±0 | 0±0 | 0±0 | 0±0 | 0.07±0 | 0.17±0.04 | 0±0 | 0±0 | 0±0 | 0±0 |
| rethanol [mmol/gCDW/h] | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 | 0±0 |
| rCO2 [mmol/gCDW/h] | 7.24±0.59 | 7.62±0.58 | 7.82±0.45 | 12.74±0.92 | 9.64±0.55 | 10.01±0.4 | 11.97±0.5 | 6.61±2.22 | 8.52±1.07 | 9.66±0.45 | 9.75±0.2 | 9.74±0.18 | 7.8±1.33 |