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Supplementary Figures

The role of ATP citrate lyase, phosphoketolase and malic enzyme in oleaginous *Rhodotorula toruloides*

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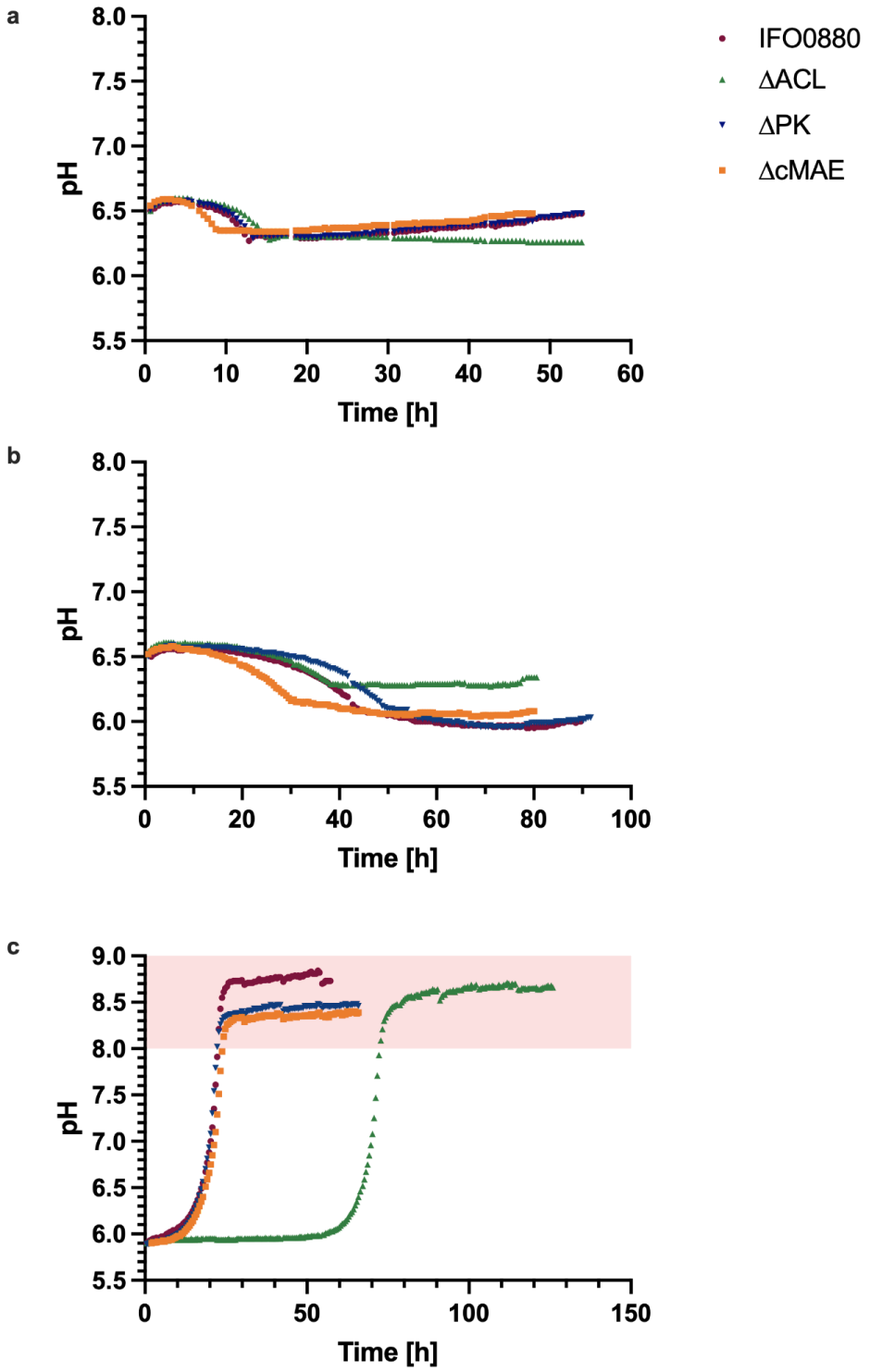

Fig S1. pH measured during growth in pH-adjusted chemically defined low-nitrogen media (C/N of 80) with glucose (20 g/L) (**a**), xylose (20 g/L) (**b**) or acetate (10 g/L) (**c**) as a carbon source obtained with non-invasive online pH sensors in falcon tube bioreactors (pink denotes out of sensor working range).

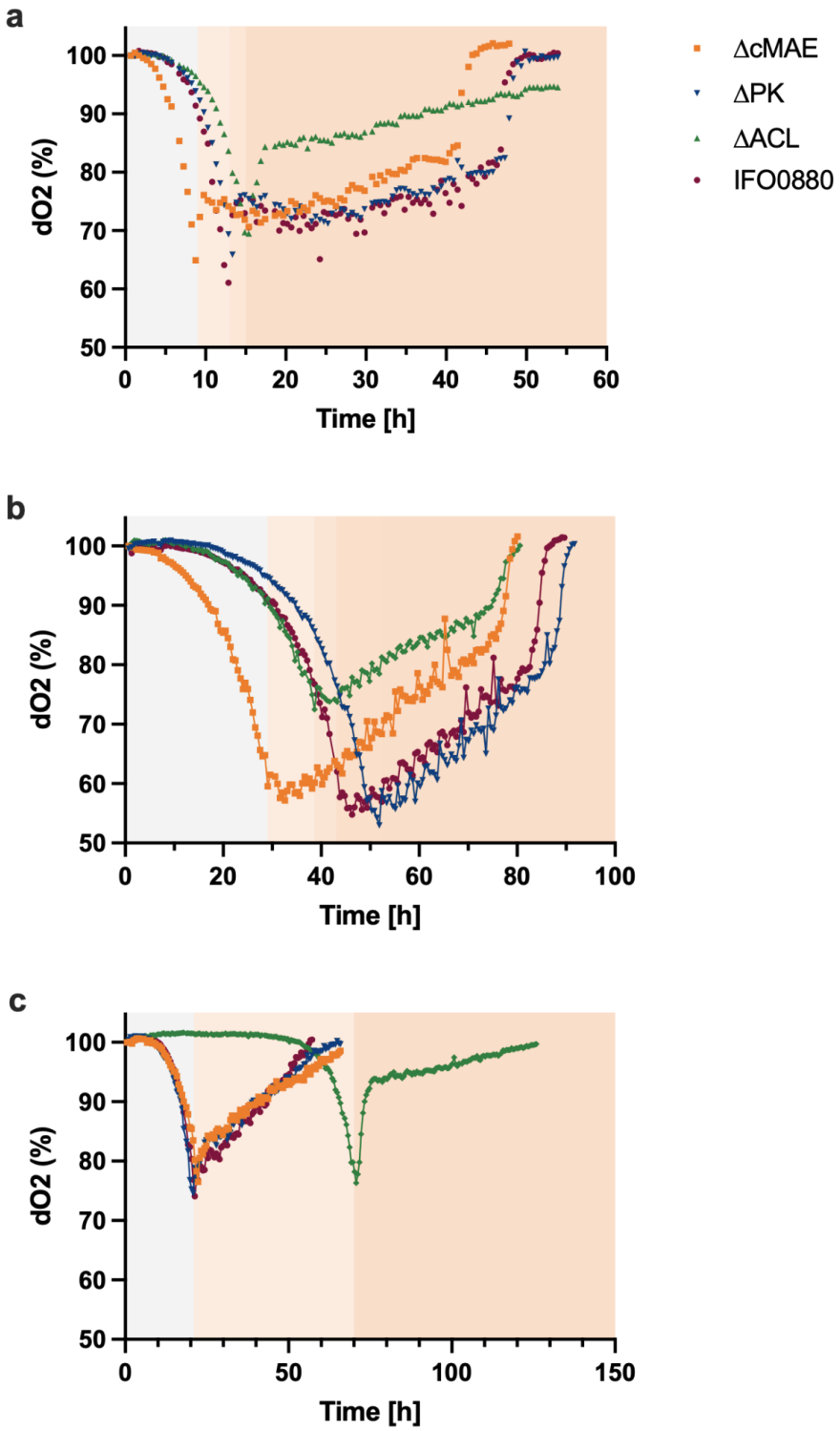

Fig S2. Dissolved oxygen curves measured during growth in pH-adjusted chemically defined low-nitrogen media (C/N of 80) with glucose (20 g/L) (**a**), xylose (20 g/L) (**b**) or acetate (10 g/L) (**c**) as a carbon source obtained with non-invasive online dO_2 sensors in falcon tube bioreactors. Background colors denote the switch in growth phases, presumably pointing to the onset of nitrogen limitation phase.

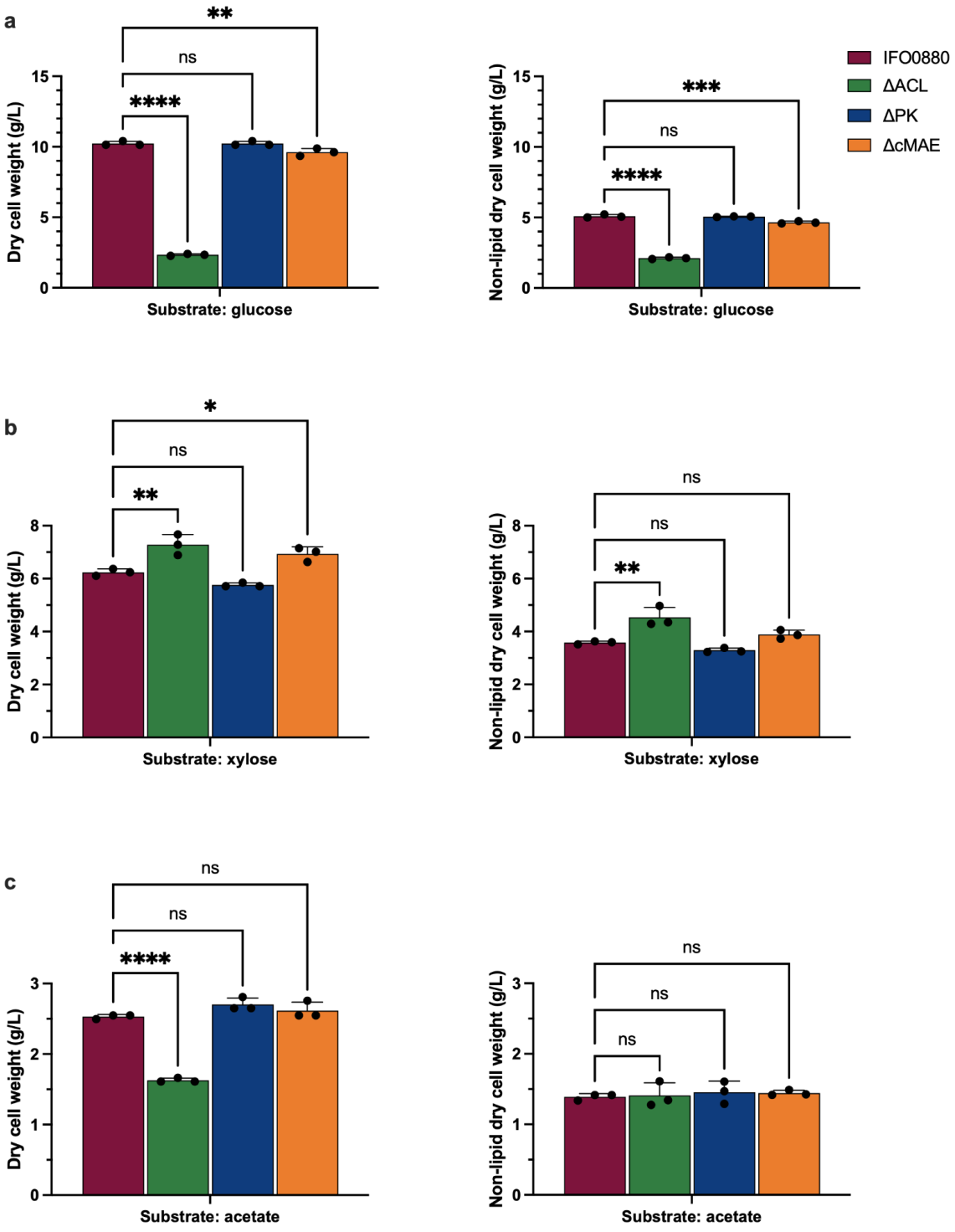

Fig S3. Dry cell weight (g/L) and non-lipid dry cell weight (g/L) measured at the end of cultivation (harvest time of each strain was different and it is presented in the main text) during growth in pH-adjusted chemically defined low-nitrogen media (C/N of 80) with glucose (20 g/L) (**a**), xylose (20 g/L) (**b**) or acetate (10 g/L) (**c**) as a carbon source. Non-lipid cell mass was calculated after subtraction of intracellular lipids from cell mass. Error bars are calculated as standard deviation from three biological replicates.

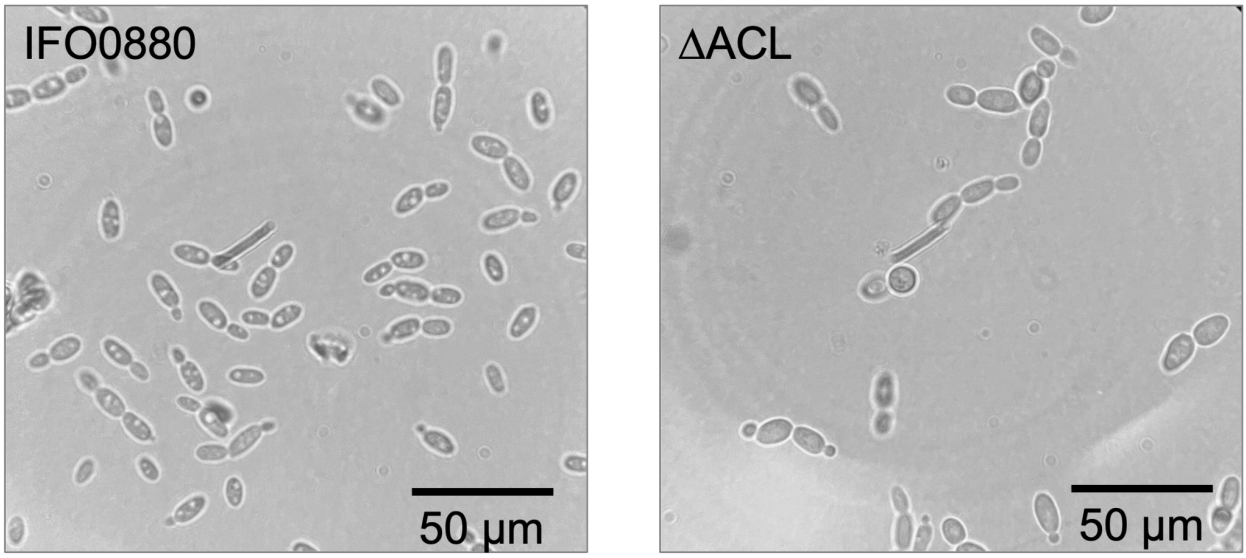

Fig S4. Morphology of the wild type IFO0880 and ΔACL strains grown in glucose-based mineral media (20 g/L), harvested during the exponential growth phase and visualized by bright-field microscope.