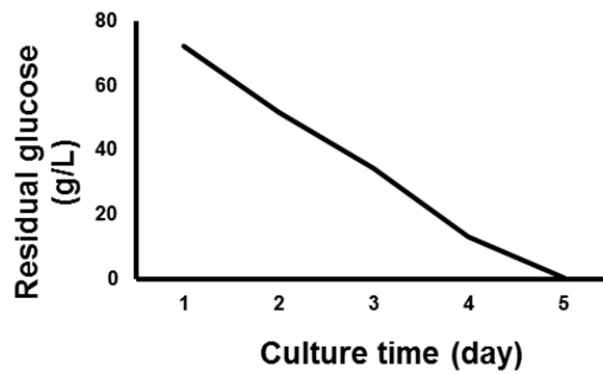


a



b



Additional file 3. Residual carbon and nitrogen sources during lipid accumulation. *R. toruloides* was cultured in the lipid accumulation medium Y4 with some modifications [23] for 5 days. (a) Residual ammonium concentration in cell culture. (b) Residual glucose concentration in cell culture.