SUPPLEMENTARY DATA

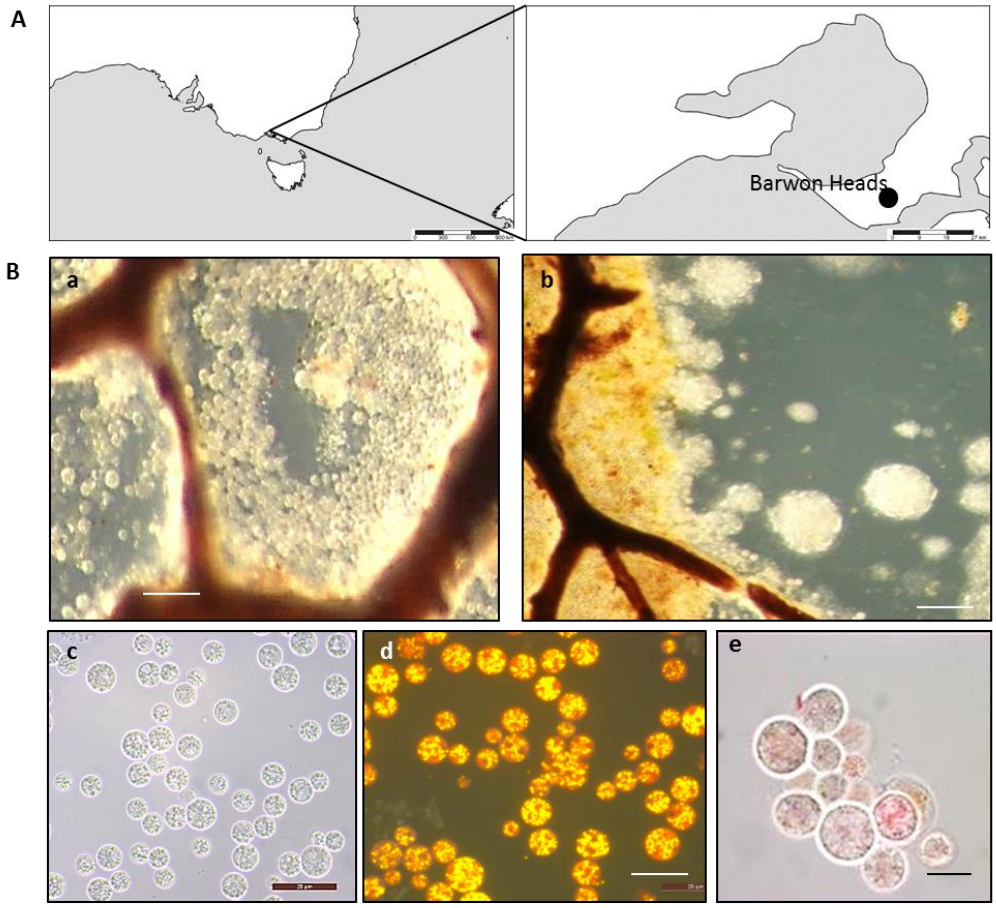

Figure S1

Fig. S1
A. Distribution of sampling sites in the mangrove habitats of Australia.
B. Microscopic analysis of thraustochytrids strains
Thraustochytrid cells were grown in mangrove leaves (a, b); Purified thraustochytrid cells (c) stained with Nile Red for lipid detection (d, yellow dots); Thraustochytrid cells with accumulated carotenoids (e). a-c, e: bright-field images; (d) fluorescent microscopy. Scale bars: a: 5cm; b: 1cm; c-e: 20 μm.

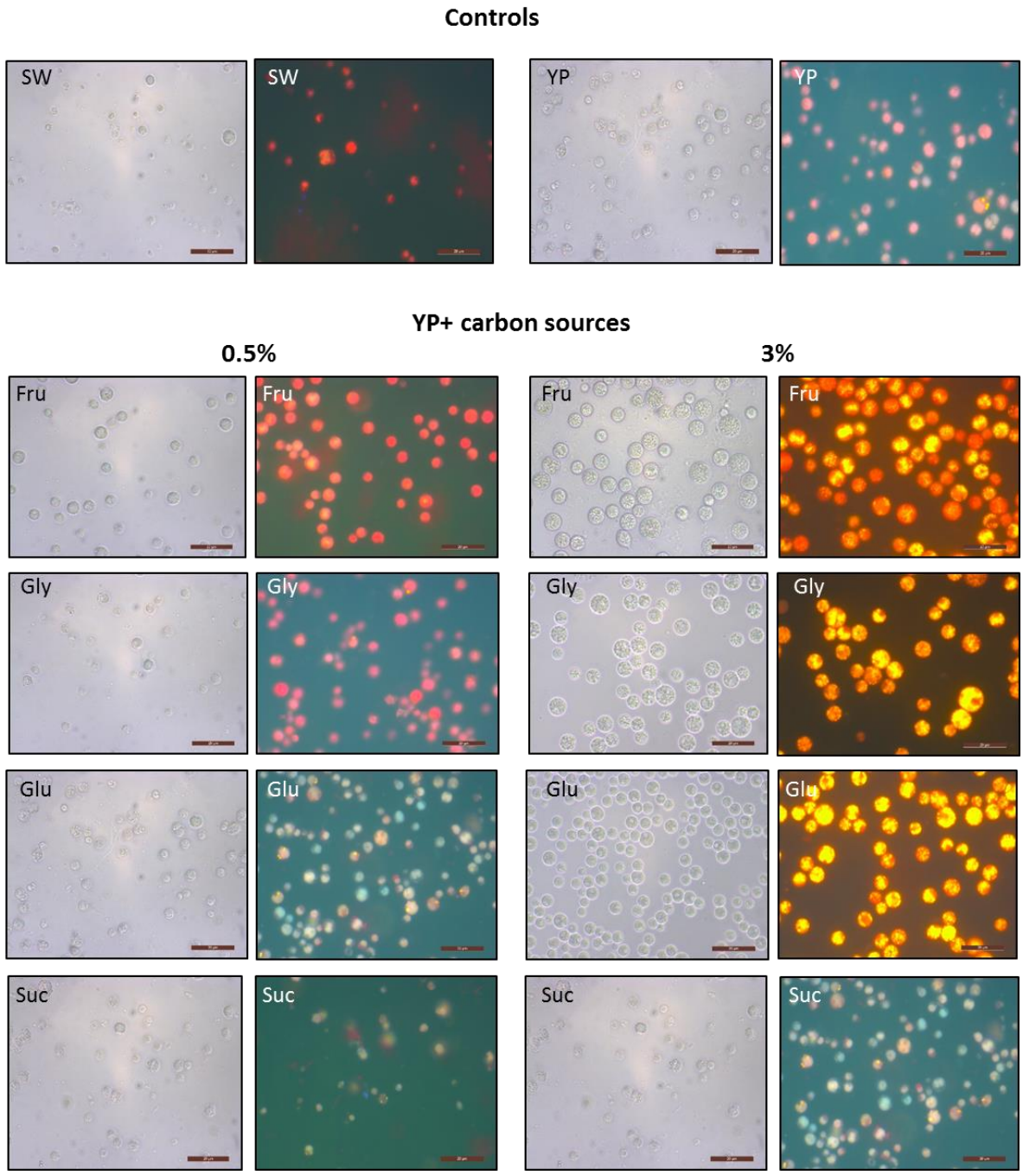

Figure S2

Fig. S2. Microscopic analysis of thraustochytrids cells grown on different carbon sources. Bright-field and fluorescent microscopy of cells grown on seawater alone (SW) and YP media and carbon sources: 0.5% and 3% of glucose (Glu); glycerol (Gly); fructose (Fru); sucrose (Suc). Cells were stained for lipids with Nile Red. Scale bars: 20 μm.

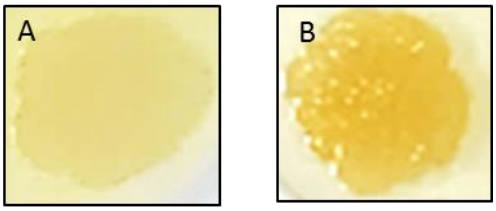

Figure S3

Fig. S3. Carotenoids production in thraustochytrids cells
A: MAN65; B: MAN70

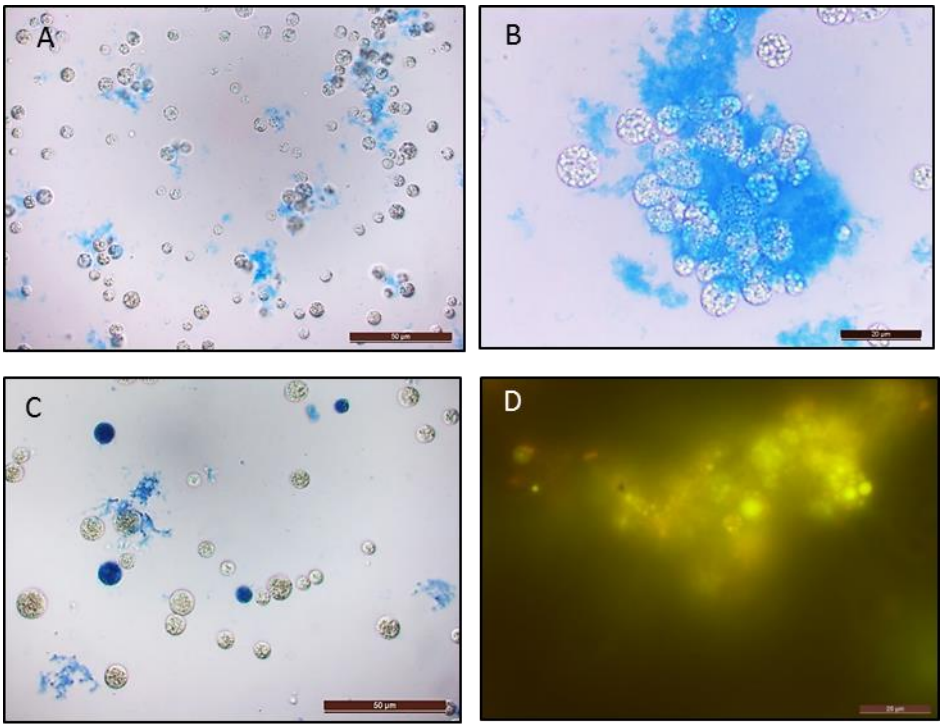

Figure S4

Fig S4. EPS accumulation in supernatant
A and B: EPS stained with 1% Alcian Blue; C: protein accumulation in EPS (staining with Amido Black); D: lipid accumulation in EPS (staining with Nile Red). Scale bars: A, C: 50 μM; B,D: 20 μM. A-C: bright-field microscopy. D: fluorescent microscopy.

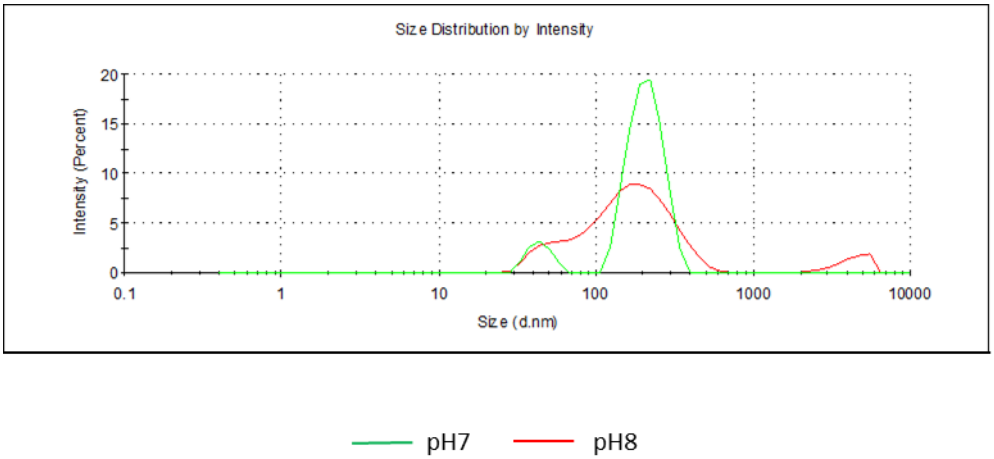

Figure S5

Fig. S5: Particle size distribution in aqueous emulsion at pH 7 and 8.

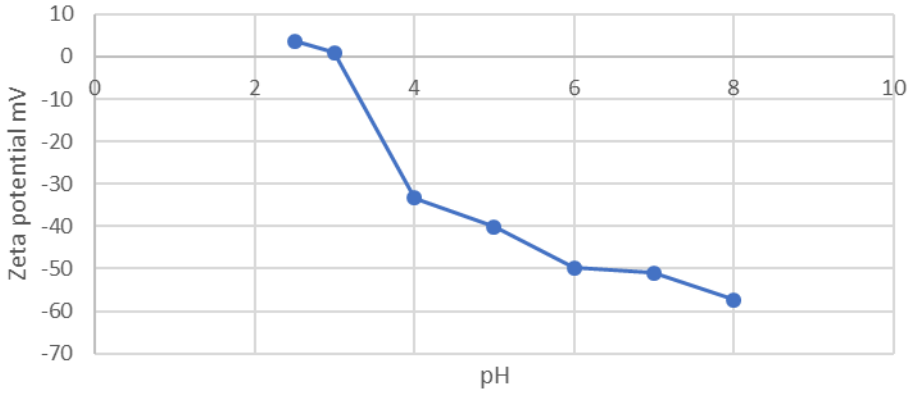

Figure S6

Fig. S6: Dependence of the particle electrical charge (zeta-potential) of extracted oil bodies on pH.