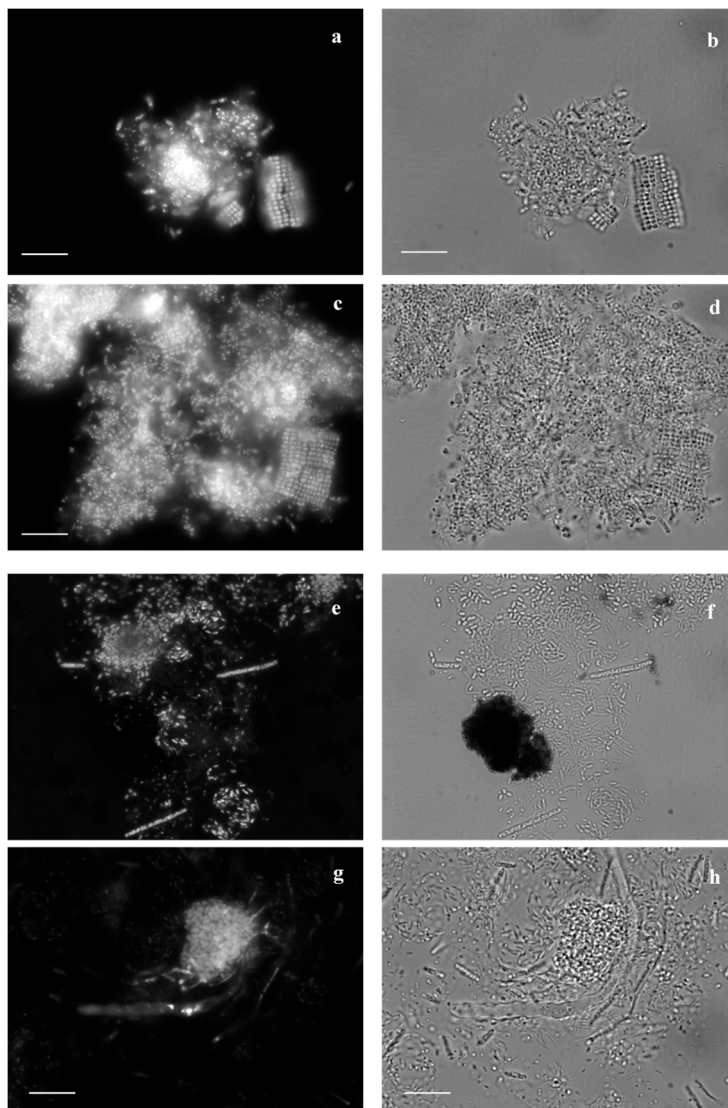


## Supplementary data

Nile Blue staining was carried out on samples from Periods I and V of the sequencing batch reactor (SBR) operation, corresponding to the maximum supplementation of nutrients and absence of supplementation. Nile Blue positive cells display a bright fluorescence signal in Fig. S1-left. Unstained cells, visible only in the corresponding bright-field image (Fig. S1-right), do not contain intracellular polyhydroxyalkanoates (PHA). From these images, it is clear that the fraction of PHA-containing cells decreased, substantially, from Period I to Period V, which confirms the observations made through the Fluorescence In Situ Hybridisation (FISH) quantification.



**Figure S1.** Nile Blue staining (*left*) and bright field (*right*) images of biomass samples collected on Period I (*a – d*) and Period V (*e – h*) of operation. Stained cells (Nile Blue-positive) indicate the presence of intracellular polyhydroxyalkanoates (PHA).