

Supplementary Figures

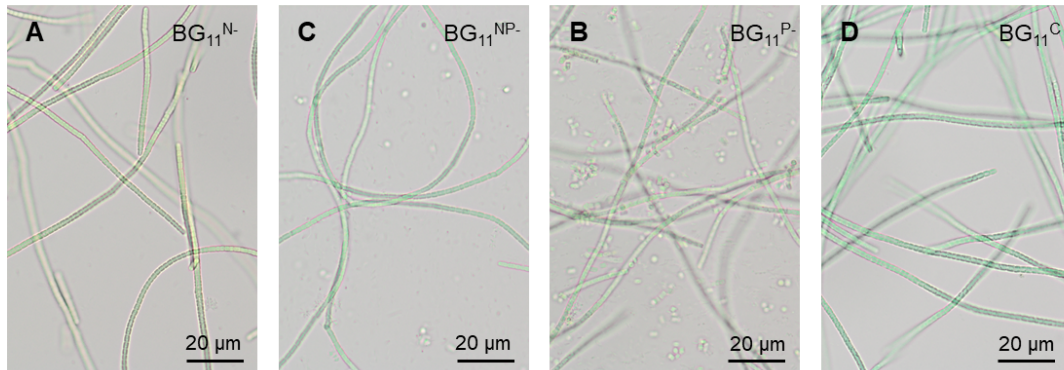


Figure S1. Morphological changes of *Leptolyngbya* sp. NIVA-CYA 255 during nitrate-deficiency, (BG_{11}^{N-} , **A**), nitrate- and phosphate- deficiency, (BG_{11}^{NP-} , **B**), phosphate- deficiency, (BG_{11}^{P-} , **C**), compared to the control culture without any deficiency, (BG_{11}^C , **D**). Images were taken after 14 d of cultivation.

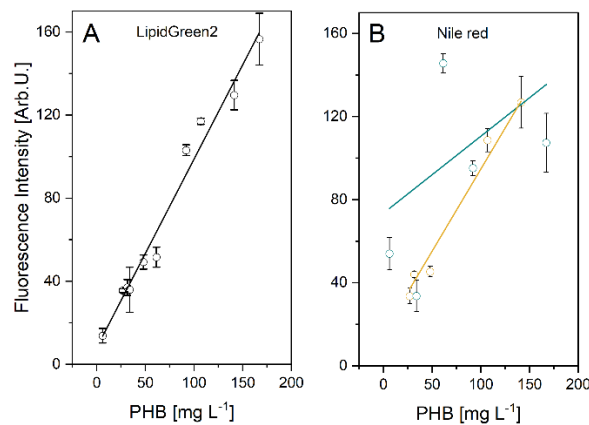


Figure S2. Linear agreement ($R^2 = 0.9883$) of LipidGreen2 fluorescence of combined BG_{11}^{N-} and BG_{11}^{NP-} cultures (**A**) and agreements of Nile red fluorescence (**B**) of BG_{11}^{N-} (Orange, $R^2 = 0.9484$) or BG_{11}^{NP-} (Blue, $R^2 = 0.3375$) to analytical PHB values.

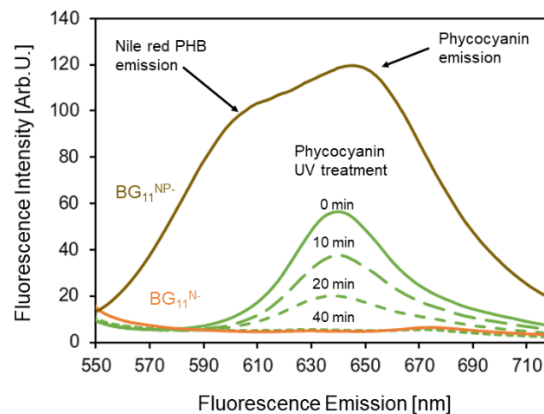


Figure S3. Fluorescence emission signal overlap of phycocyanin and Nile red during PHB staining of *Leptolyngbya* sp. NIVA-CYA 255. The presence of phycocyanin (emission peaks highlighted in green) can be eliminated by UV_{234} radiation for at least 40 min. After UV treatment, phycocyanin emission was comparable to

BG₁₁^N-, which did not show incident phycocyanin fluorescence (orange). Emission spectra were obtained at 525 nm excitation.

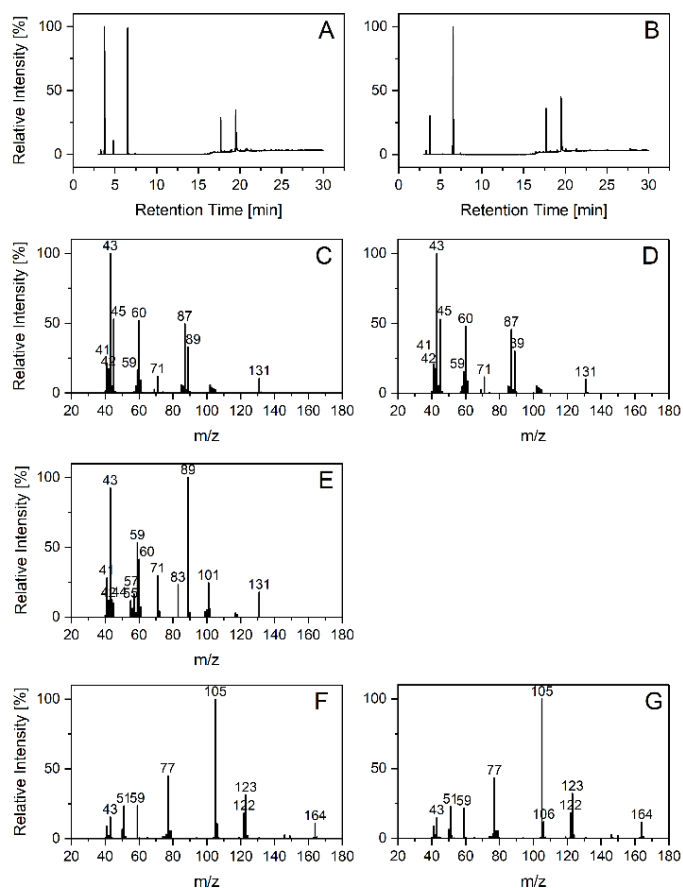


Figure S4. GC-MS chromatograms and mass spectra of PHBHV standard [left row] and PHB extracted from *Leptolyngbya* sp. NIVA-CYA 255 [right row]. Retention times: 3.75 min: hydroxybutyrate (C, D), 4.8 min: hydroxyvalerate (E), 6.5 min: benzoic acid, (F, G).