

Figure S1. Typical relative spectral power distribution of white, blue and red LED lights in the Algem® bioreactor.

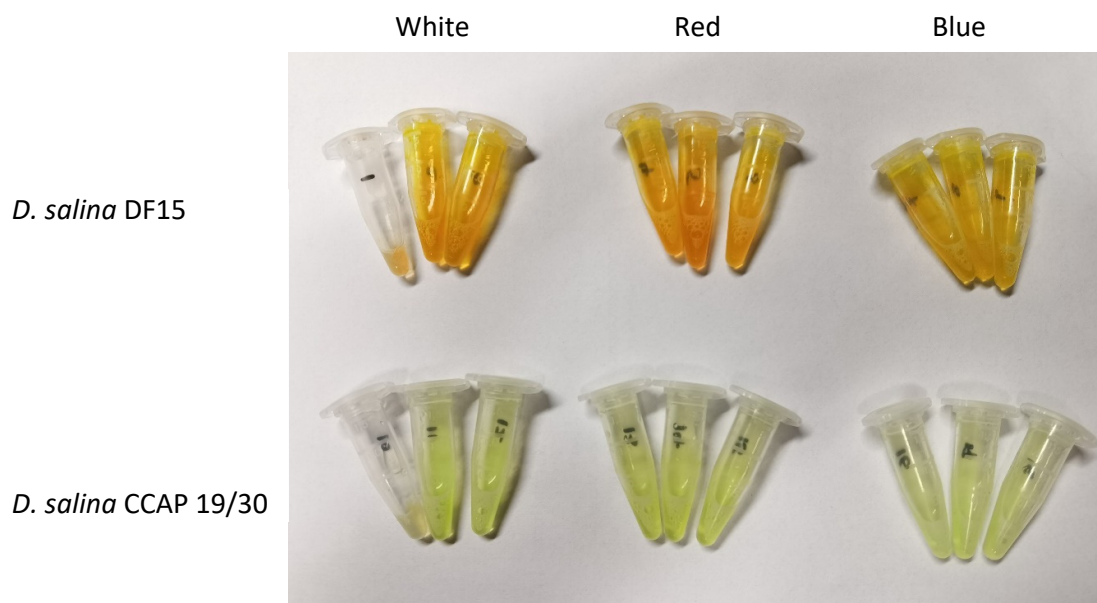


Figure S2: Appearance of *D. salina* cultures at the end of each treatment. Cultivation was conducted at 25°C, pH 7.5 and 100 rpm mixing using white, red and blue light at 200 $\mu\text{mol photons m}^{-2} \text{s}^{-1}$.

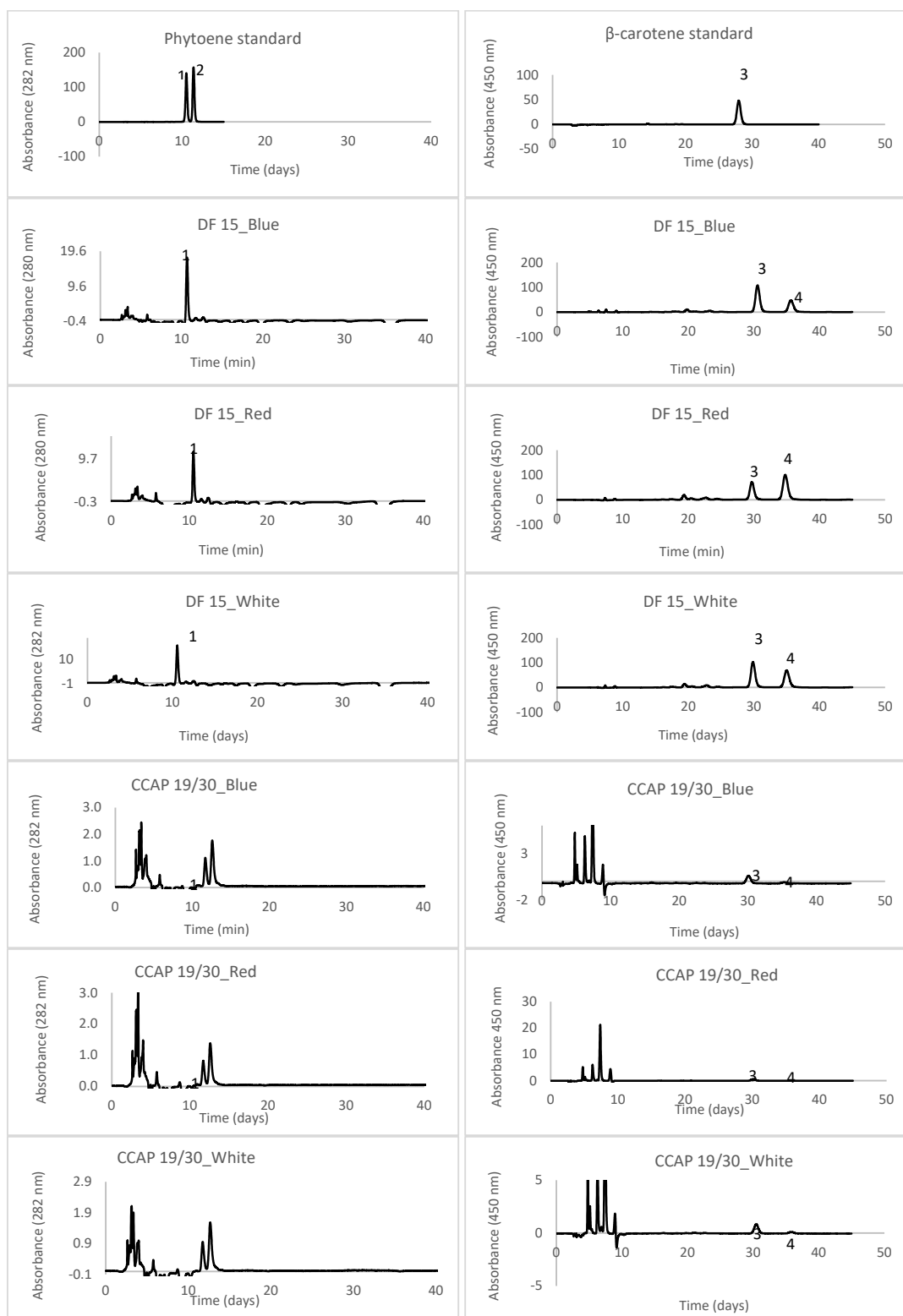


Figure S3: HPLC-DAD chromatograms of carotenoids extract from *D. salina* DF15 and *D. salina* CCAP 19/30 under different light wavelengths. The peaks are identified as: phytoene isomer 1 (1), phytoene isomer 2 (2), *all-trans* β -carotene (3) and *9-cis* β -carotene (4).