



Fig. S1. Growth curve of *Synechococcus* sp. VDW cells and antioxidant activity of its crude protein hydrolysate. Data are presented as mean value \pm S.D. of three replicates

Table S1. Amino acid composition of *Synechococcus* sp. VDW cells

Amino acid	w/%
Alanine (Ala)	0.17
Arginine (Arg)	0.07
Glycine (Gly)	0.11
Aspartic acid (Asp)	0.18
Cysteine (Cys)	0.01
Glutamic acid (Glu)	0.19
Leucine (Leu)	0.17
Isoleucine (Ile)	0.10
Histidine (His)	0.03
Threonine (Thr)	0.11
Proline (Pro)	0.08
Lysine (Lys)	0.08
Methionine (Met)	0.04
Serine (Ser)	0.09
Phenylalanine (Phe)	0.16
Tyrosine (Tyr)	0.12
Tryptophan (Trp)	0.08
Valine (Val)	0.12
Total	1.91

Table S2. IC₅₀ values of ultrafiltration fractions of *Synechococcus* sp. VDW hydrolyzed by trypsin against DPPH and ABTS

Fraction	IC ₅₀ /(µg/mL)	
	DPPH	ABTS
F _A (<3 kDa)	(13.6 \pm 0.2) ^b	(11.5 \pm 0.3) ^a
F _B (3–5 kDa)	(17.7 \pm 0.9) ^c	(18.9 \pm 0.1) ^b
F _C (5–10 kDa)	(55.6 \pm 5.1) ^d	(48.3 \pm 0.8) ^c
F _D (>10 kDa)	(74.7 \pm 8.7) ^d	(73.3 \pm 1.9) ^c
Crude hydrolysate	(151.2 \pm 12.1) ^e	(56.9 \pm 0.8) ^c
Control	(1.4 \pm 0.3) ^a	(127.0 \pm 4.3) ^d

Data are presented as mean value \pm S.D. of three replicates. Different letters indicate significant differences among the groups according to Duncan's test ($p \leq 0.05$)

Table S3. Antioxidant activity of the RP-HPLC fractionation (F₁₋₄)

Fraction	IC ₅₀ /(µg/mL)	
	DPPH	ABTS
F ₁ (0–10 min)	(55.3 \pm 3.1) ^a	(2.1 \pm 0.7) ^b
F ₂ (10–20 min)	(47.0 \pm 3.8) ^b	(0.9 \pm 0.6) ^b
F ₃ (20–30 min)	(42.4 \pm 1.5) ^{bc}	(1.9 \pm 0.6) ^b
F ₄ (30–40 min)	(38.3 \pm 1.5) ^c	(0.6 \pm 0.6) ^a

Data are presented as mean value \pm S.D. of three replicates. Different letters indicate significant differences among the groups according to Duncan's test ($p \leq 0.05$)