Table S1. Values (means ± standard error) of *Microcystis aeruginosa* cells growth exposed to different concentrations of aqueous extract of *Myriophyllum aquaticum* (Control, 0.1, 10 and 100 mg.L^{-1}) collected in different season (summer, autumn, winter and spring).

Cells Growth	D.F	Exposure time (days)				
		1	3	5	7	9
Two-way ANOVA F-values						
Extracts	3	1899***	1171***	2011***	5938***	15031***
Season	3	1.50	8.00***	5.28***	87.02***	92.75***
Extracts *vs* season	9	1.33	5.35***	4.08***	52.78***	46.39 ***
Seasons	**Extracts (mg.L^{-1})**					
Summer	Control (0)	1.41 x 10^6 ± 1.33 x 10^4 **aA**	2.07 x 10^6 ± 7.39 x 10^4 **aA**	3.52 x 10^6 ± 1.69 x 10^5 **aA**	6.72 x 10^6 ± 1.46 x 10^5 **aA**	9.69 x 10^6 ± 8.46 x 10^5 **aA**
	0.1	1.28 x 10^6 ± 9.45 x 10^3 **bA**	1.78 x 10^6 ± 3.69 x 10^4 **bA**	3.20 x 10^6 ± 3.20 x 10^4 **bA**	5.58 x 10^6 ± 2.60 x 10^4 **bA**	8.00 x 10^6 ± 8.46 x 10^4 **bA**
	10	1.10 x 10^6 ± 2.91 x 10^4 **cA**	1.52 x 10^6 ± 1.61 x 10^4 **cA**	2.02 x 10^6 ± 4.88 x 10^4 **cA**	3.84 x 10^6 ± 6.40 x 10^4 **cA**	5.50 x 10^6 ± 2.24 x 10^4 **cA**
	100	9.33 x 10^6 ± 7.51 x 10^3 **dA**	8.38 x 10^5 ± 1.74 x 10^4 **dA**	6.94 x 10^5 ± 1.56 x 10^4 **dA**	5.78 x 10^5 ± 1.31 x 10^4 **dA**	4.80 x 10^5 ± 2.80 x 10^4 **dA**
Autumn	Control (0)	1.41 x 10^6 ± 1.33 x 10^4 **aA**	2.07 x 10^6 ± 1.33 x 10^4 **aA**	3.52 x 10^6 ± 1.69 x 10^5 **aA**	6.72 x 10^6 ± 1.46 x 10^5 **aA**	9.69 x 10^6 ± 8.46 x 10^5 **aA**
	0.1	1.26 x 10^6 ± 2.00 x 10^3 **bA**	1.74 x 10^6 ± 9.77 x 10^4 **bA**	3.24 x 10^6 ± 1.02 x 10^4 **bA**	4.87 x 10^6 ± 1.29 x 10^4 **bB**	7.76 x 10^6 ± 1.81 x 10^4 **bA**
	10	1.08 x 10^6 ± 4.37 x 10^3 **cA**	1.27 x 10^6 ± 4.79 x 10^4 **cB**	1.58 x 10^6 ± 2.70 x 10^4 **cB**	1.92 x 10^6 ± 1.15 x 10^4 **cB**	3.60 x 10^6 ± 8.05 x 10^4 **cB**
	100	9.29 x 10^5 ± 1.10 x 10^4 **dA**	8.29 x 10^5 ± 1.13 x 10^4 **dB**	6.62 x 10^5 ± 1.81 x 10^4 **dB**	5.16 x 10^5 ± 1.56 x 10^4 **dB**	3.04 x 10^5 ± 2.92 x 10^4 **dB**
Winter	Control (0)	1.41 x 10^6 ± 1.33 x 10^4 **aA**	2.07 x 10^6 ± 1.33 x 10^4 **aA**	3.52 x 10^6 ± 1.69 x 10^5 **aA**	6.72 x 10^6 ± 1.46 x 10^5 **aA**	9.69 x 10^6 ± 8.46 x 10^5 **aA**
	0.1	1.27 x 10^6 ± 9.33 x 10^3 **bA**	1.80 x 10^6 ± 4.88 x 10^4 **bA**	3.26 x 10^6 ± 6.40 x 10^4 **bA**	4.92 x 10^6 ± 5.54 x 10^4 **bB**	7.84 x 10^6 ± 1.69 x 10^4 **bA**
	10	1.08 x 10^6 ± 1.10 x 10^4 **cA**	1.55 x 10^6 ± 2.04 x 10^4 **cA**	2.07 x 10^6 ± 8.05 x 10^4 **cA**	3.98 x 10^6 ± 9.23 x 10^4 **cA**	5.31 x 10^6 ± 1.15 x 10^4 **cA**
	100	9.28 x 10^6 ± 7.68 x 10^3 **dA**	8.35 x 10^5 ± 2.46 x 10^4 **dA**	7.13 x 10^5 ± 2.00 x 10^4 **dA**	5.36 x 10^5 ± 2.00 x 10^4 **dA**	3.74 x 10^5 ± 7.21 x 10^3 **dC**
Spring	Control (0)	1.41 x 10^6 ± 1.33 x 10^4 **aA**	2.07 x 10^6 ± 1.33 x 10^4 **aA**	3.52 x 10^6 ± 1.69 x 10^5 **aA**	6.72 x 10^6 ± 1.46 x 10^5 **aA**	9.69 x 10^6 ± 8.46 x 10^5 **aA**
	0.1	1.29 x 10^6 ± 1.97 x 10^4 **bA**	1.77 x 10^6 ± 6.66 x 10^4 **bA**	3.27 x 10^6 ± 1.29 x 10^5 **bA**	5.40 x 10^6 ± 1.46 x 10^4 **bA**	8.75 x 10^6 ± 2.05 x 10^4 **bB**
	10	1.06 x 10^6 ± 8.71 x 10^4 **cA**	1.61 x 10^6 ± 3.72 x 10^4 **cA**	2.08 x 10^6 ± 5.54 x 10^4 **cA**	4.01 x 10^6 ± 6.66 x 10^4 **cA**	5.38 x 10^6 ± 1.84 x 10^4 **cA**
	100	9.13 x 10^6 ± 9.33x 10^3 **dA**	8.58 x 10^5 ± 1.44 x 10^4 **dA**	6.96 x 10^5 ± 3.44 x 10^4 **dA**	5.84 x 10^5 ± 1.44 x 10^4 **dA**	5.32 x 10^5 ± 3.46 x 10^3 **dD**
Comparison of means (P ≤ 0.05)						
Seasons	Summer	1.18 x 10^6 ± 2.08 x 10^5 **A**	1.55 x 10^6 ± 5.28 x 10^5 **A**	2.33 x 10^6 ± 1.28 x 10^5 **A**	4.18 x 10^6 ± 2.66 x 10^5 **A**	5.92 x 10^6 ± 4.01 x 10^5 **A**
	Autumn	1.17 x 10^6 ± 2.10 x 10^5 **A**	1.48 x 10^6 ± 5.42 x 10^5 **B**	2.25 x 10^6 ± 1.36 x 10^5 **B**	3.50 x 10^6 ± 2.80 x 10^5 **B**	5.34 x 10^6 ± 4.21 x 10^5 **B**
	Winter	1.17 x 10^6 ± 2.11 x 10^5 **A**	1.56 x 10^6 ± 5.30 x 10^5 **A**	2.39 x 10^6 ± 1.28 x 10^5 **A**	4.04 x 10^6 ± 2.58 x 10^5 **AC**	5.80 x 10^6 ± 4.04 x 10^5 **A**
	Spring	1.17 x 10^6 ± 2.24 x 10^5 **A**	1.57 x 10^6 ± 5.15 x 10^5 **A**	2.39 x 10^6 ± 1.29 x 10^5 **A**	4.18 x 10^6 ± 2.64 x 10^5 **A**	6.09 x 10^6 ± 4.14 x 10^5 **C**

*Significant P ≤ 0.05; **Significant P ≤ 0.01; ***Significant P ≤ 0.001. Treatment means from two-way ANOVA followed by Tukey test. Different lowercase letters indicate significant differences between different extract concentrations. Different uppercase letters indicate significant differences between same extract concentration in different seasons (P ≤ 0.05).

Table S2. Values (means ± standard error) of inhibition rate (%) on *Microcystis aeruginosa* cells growth exposed to different concentrations of aqueous extract of *Myriophyllum aquaticum* (0.1, 10 and 100 mg.L^{-1}) collected in different season (summer, autumn, winter and spring).

Inhibition rate (%)	D.F	Exposure time (days)				
		1	3	5	7	9
Two-way ANOVA F-values						
Extracts	2	1169***	884.00***	2396.00***	3039.00***	24032.00***
Season	3	1.83	9.57***	8.01***	75.76***	212.30***
Extracts *vs* season	9	1.57	6.05***	6.51***	42.20***	72.80 ***
Seasons	**Extracts (mg.L^{-1})**					
Summer	0.1	9.25 ± 1.42 **aA**	13.86 ± 2.69 **aA**	8.95 ± 3.68 **aA**	16.75 ± 5.49 **aA**	17.48 ± 1.05 **aA**
	10	21.68 ± 1.68 **bA**	26.08 ± 2.12 **bA**	42.33 ± 3.02 **bA**	42.82 ± 2.18 **bA**	43.24 ± 1.84 **bA**
	100	33.86 ± 1.16 **cA**	59.44 ±1.51 **cA**	80.26 ± 0.20 **cA**	91.39 ± 0.20 **cA**	95.04 ± 0.33 **cA**
Autumn	0.1	10.57 ± 0.61 **aA**	15.41 ± 5.04 **aA**	7.83 ± 1.48 **aA**	27.43 ± 2.74 **aB**	19.91 ± 1.17 **aA**
	10	23.38 ± 0.68 **bA**	38.09 ± 3.98 **bB**	55.05 ± 1.41 **bB**	62.81 ± 0.66 **bB**	71.40 ± 1.24 **bB**
	100	34.14 ± 1.95 **cA**	59.87 ± 2.00 **cA**	81.13 ± 0.31 **cA**	92.31 ± 0.31 **cA**	96.85 ± 0.30 **cA**
Winter	0.1	9.77 ± 1.47 **aA**	12.84 ± 2.03 **aA**	7.17 ± 3.29 **aA**	26.64 ± 1.91 **aB**	19.14 ± 1.17 **aA**
	10	22.91 ± 1.15 **bA**	24.63 ± 2.25 **bA**	41.17 ± 2.15 **bA**	40.63 ± 0.45 **bA**	45.21 ± 1.08 **bA**
	100	31.19 ± 0.91 **cA**	59.59 ± 2.09 **cA**	79.70 ± 1.24 **cA**	92.02 ± 0.42 **cA**	96.14 ± 0.09 **cA**
Spring	0.1	8.61 ± 1.58 **aA**	14.43 ± 0.76 **aA**	6.90 ± 3.54 **aA**	19.49 ± 3.02 **aA**	19.68 ± 1.32 **aB**
	10	24.61 ± 0.55 **bA**	21.91 ± 3.17 **bA**	40.17 ± 4.29 **bA**	40.31 ± 0.69 **bA**	44.44 ± 0.29 **bA**
	100	35.43 ± 1.03 **cA**	58.46 ± 1.96 **cA**	80.17 ± 1.46 **cA**	91.29 ± 0.16 **cA**	94.51 ± 0.40 **cA**
Comparison of means (P ≤ 0.05)						
Seasons	Summer	21.59 ± 12.31 **A**	33.18 ± 23.59 **A**	43.85 ± 35.67 **A**	50.32 ± 37.88 **A**	51.93 ± 39.50 **A**
	Autumn	22.69 ± 11.79 **A**	37.79 ± 22.23 **B**	48.00 ± 37.15 **B**	60.85 ± 32.48 **B**	62.74 ± 39.20 **B**
	Winter	22.29 ± 12.24 **A**	32.35 ± 24.31 **A**	42.68 ± 36.28 **A**	53.09 ± 34.42 **A**	53.50 ± 39.16 **A**
	Spring	22.88 ± 13.49 **A**	31.60 ± 23.56 **A**	42.61 ± 36.67 **A**	50.36 ± 36.94 **A**	49.54 ± 42.64 **C**

*Significant P ≤ 0.05; **Significant P ≤ 0.01; ***Significant P ≤ 0.001. Treatment means from two-way ANOVA followed by Tukey test. Different lowercase letters indicate significant differences between different extract concentrations. Different uppercase letters indicate significant differences between same extract concentration in different seasons (P ≤ 0.05).

Table S3. Values (means ± standard error) of photosynthetic pigments concentration of *Microcystis aeruginosa* exposed to different concentrations of aqueous extract of *Myriophyllum aquaticum* (0.1, 10 and 100 mg.L^{-1}) collected in different season (summer, autumn, winter and spring).

	D.F	Photosynthetic pigments concentration (mg.mL^{-1})			
		Chlorophyll-*a* (mg.L^{-1})	Phycocyanin	Allophycocyanin	Phycoerythrin
Two-way ANOVA F-values					
Extracts	2	93.89***	146.40***	141.20***	155.70***
Season	3	18.56***	6.72***	10.12***	5.16**
Extracts *vs* season	9	10.69***	1.44	3.37***	3.35**
Seasons	**Extracts (mg.L^{-1})**				
Summer	Control (0)	0.56 ± 0.04 **aA**	2.71 ± 0.15 **aA**	1.82 ± 0.04 **aA**	1.54 ± 0.07 **aA**
	0.1	0.47 ± 0.01 **bA**	2.21 ± 0.22 **aA**	1.02 ± 0.10 **bA**	0.90 ± 0.07 **bA**
	10	0.16 ± 0.01 **cA**	1.71 ± 0.23 **bA**	0.88 ± 0.06 **bA**	0.80 ± 0.06 **bA**
	100	0.08 ± 0.01 **dA**	0.61 ±0.21 **cA**	0.70 ± 0.14 **bcA**	0.76 ± 0.04 **bA**
Autumn	Control (0)	0.56 ± 0.04 **aA**	2.71 ± 0.15 **aA**	1.82 ± 0.04 **aA**	1.54 ± 0.07 **aA**
	0.1	0.31 ± 0.01 **bB**	1.61 ± 0.05 **bB**	0.47 ± 0.21 **bB**	0.70 ± 0.05 **bA**
	10	0.10 ± 0.01 **cA**	1.54 ± 0.02 **bB**	0.45 ± 0.2 **bB**	0.61 ± 0.02 **bB**
	100	0.07 ± 0.01 **dA**	0.01 ± 0.00 **cB**	0.12 ± 0.09 **cB**	0.31 ± 0.04 **c B**
Winter	Control (0)	0.56 ± 0.04 **aA**	2.71 ± 0.15 **aA**	1.82 ± 0.04 **aA**	1.54 ± 0.07 **aA**
	0.1	0.35 ± 0.01 **bB**	1.88 ± 0.14 **bA**	0.75 ± 0.16 **bA**	0.80 ± 0.10 **bA**
	10	0.13 ± 0.02 **cA**	1.81 ± 0.05 **bA**	0.67 ± 0.12 **bB**	0.63 ± 0.01 **bB**
	100	0.05 ± 0.01 **dA**	0.61 ± 0.06 **cA**	0.30 ± 0.18 **cA**	0.64 ± 0.01 **bA**
Spring	Control (0)	0.56 ± 0.04 **aA**	2.71 ± 0.15 **aA**	1.82 ± 0.04 **aA**	1.54 ± 0.07 **aA**
	0.1	0.31 ± 0.01 **bB**	2.07 ± 0.23 **aA**	0.73 ± 0.07 **bA**	1.00 ± 0.09 **bA**
	10	0.13 ± 0.02 **cA**	2.02 ± 0.05 **bA**	0.80 ± 0.16 **bA**	0.86 ± 0.02 **bA**
	100	0.08 ± 0.01 **dA**	0.95 ± 0.08 **cA**	0.73 ± 0.07 **bA**	0.74 ± 0.04 **cA**
Comparison of means (P ≤ 0.05)					
Seasons	Summer	0.32 ± 0.11 **A**	1.81 ± 0.44 **A**	1.10 ± 0.25 **A**	1.00 ± 0.18 **A**
	Autumn	0.26 ± 0.11 **B**	1.46 ± 0.55 **B**	0.71 ± 0.37 **B**	0.79 ± 0.26 **B**
	Winter	0.27 ± 0.11 **B**	1.75 ± 0.43 **A**	0.88 ± 0.32 **B**	0.91 ± 0.22 **B**
	Spring	0.27 ± 0.11 **B**	1.93 ± 0.35 **A**	1.02 ± 0.26 **A**	1.04 ± 0.18 **A**

*Significant P ≤ 0.05; **Significant P ≤ 0.01; ***Significant P ≤ 0.001. Treatment means from two-way ANOVA followed by Tukey test. Different lowercase letters indicate significant differences between different extract concentrations. Different uppercase letters indicate significant differences between same extract concentration in different seasons (P ≤ 0.05).