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Responses of *Hydrilla verticillata* (L.f.) Royle and *Vallisneria natans* (Lour.) hara to glyphosate exposure

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2 ***natans* (Lour.) Hara to glyphosate exposure**

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10 **Abstract**

11 Glyphosate is a broad-spectrum herbicide that is frequently detected in water
12 bodies and is harmful to aquatic systems. We conducted an experiment to explore the
13 ecological sensitivity of *Hydrilla verticillata* (L.f.) Royle and *Vallisneria natans*
14 (Lour.) Hara to glyphosate. Our research focused on the physiological responses of *H.*
15 *verticillata* and *V. natans* after exposure to various concentrations of glyphosate (0, 1,
16 10, 20, 30, 40, 50 and 80 mg/L) in hydroponic culture after one day (1D) and seven
17 days (7D). The results show that after 1D, the soluble protein content of *H.*
18 *verticillata* was significantly stimulated under low herbicide concentrations. Other
19 indices for *H. verticillata* and *V. natans* had no remarkable changes at 1D. After 7D of
20 treatment, the soluble protein content of *H. verticillata* showed no significant
21 differences, while the malondialdehyde (MDA), pigment contents and catalase (CAT)

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