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*Functional Plant Biology*

### Supplementary Material

#### **Effects of sulfate on the photosynthetic physiology characteristics of *Hydrocotyle vulgaris* under zinc stress**

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## Supplementary material

**Table S1**

**The effects of Zn, sulfate and Zn×sulfate on each tested parameter of *H. vulgaris***

Source of variance	Zn	Sulfate	Zn×Sulfate	Error
	df=3	df=1	df=1	df=12
<i>MDIB</i>	$1.06 \times 10^3$ ***	76.21***	0.33 ns	3.52
Shoot Zn concentration	$1.09 \times 10^7$ ***	$6.41 \times 10$ ***	$4.41 \times 10^4$ ns	$1.81 \times 10^4$
Root Zn concentration	$5.24 \times 10^7$ ***	$5.43 \times 10^5$ *	$1.10 \times 10^8$ ***	$8.15 \times 10^4$
<i>TF</i>	0.13***	0.00*	0.02*	0.00
Shoot total Zn	$7.11 \times 10^2$ ***	78.13*	1.32 ns	7.58
Root total Zn	$3.13 \times 10^3$ ***	21.44 ns	$1.94 \times 10^2$	22.74
Total Zn	$6.87 \times 10^3$ ***	17.76 ns	$2.27 \times 10^2$ *	0.00
<i>Chla</i>	0.23***	0.05***	0.00 ns	0.00
<i>Chlb</i>	0.39***	0.00 ns	3.33 ns	0.01
<i>Chla/Chlb</i>	0.02 ns	7.50 ns	0.01 ns	0.20
<i>Car</i>	0.00*	0.00 ns	0.00 ns	0.00
<i>Pn</i>	65.39***	13.12***	7.00***	0.14
<i>Gs</i>	0.10***	0.00***	0.00**	8.33
<i>Ci</i>	$3.15 \times 10^3$ ***	$1.18 \times 10^3$ ***	14.08 ns	38.40
<i>Tr</i>	$2.79 \times 10^3$ ***	$1.18 \times 10^3$ ***	14.08 ns	47.56
<i>Fv/Fm</i>	0.02***	0.00***	0.00***	0.00
<i>Fv'/Fm'</i>	0.02*	0.02***	0.01***	0.00
<i>ØPSII</i>	0.02***	0.01*	0.00*	0.00
<i>ETR</i>	0.66***	0.36***	0.14***	0.00
<i>qP</i>	0.05***	0.19*	0.01 ns	0.00
<i>NPQ</i>	0.34***	0.19 ns	0.15*	0.03

\*, \*\*, \*\*\*and ns indicate significance at the 0.001, 0.01, and 0.05 levels and a lack of significance, respectively.