

Table II. Soluble metabolite abundances in *Arabidopsis* cell suspension cultures grown under control conditions (21°C, no mannitol), at high temperature (29°C), and under hyperosmotic stress (171 mM mannitol)

Soluble metabolites were extracted with perchloric acid, and abundances were determined using ¹³C-decoupled ¹H NMR spectroscopy. All values are in μmol mg⁻¹ dry weight and are means ± SD from four replicates. Values indicated in boldface are significantly different (Student's *t* test, *P* < 0.05) from the corresponding value for control cells.

Metabolite	Treatment		
	Control	29°C	Hyperosmotic
Suc	0.060 ± 0.019	0.098 ± 0.004	0.086 ± 0.007
Citrate	0.112 ± 0.019	0.252 ± 0.015	0.050 ± 0.012
Malate	0.183 ± 0.019	0.211 ± 0.019	0.059 ± 0.025
Succinate	0.028 ± 0.029	0.011 ± 0.002	0.013 ± 0.003
Fumarate	0.002 ± 0.001	0.000 ± 0.000	0.000 ± 0.000
Asp	0.040 ± 0.008	0.080 ± 0.003	0.013 ± 0.005
Glu	0.135 ± 0.007	0.135 ± 0.008	0.041 ± 0.005
Gln	0.148 ± 0.027	0.205 ± 0.009	0.039 ± 0.015
γ-Aminobutyrate	0.041 ± 0.006	0.071 ± 0.002	0.031 ± 0.004
Ala	0.194 ± 0.077	0.334 ± 0.039	0.042 ± 0.010