

Table 4. Subcellular metabolite concentrations in spinach leaves after 8.5 h illumination. The concentrations were evaluated from earlier measurements, as cited below

| Metabolite | Stroma | Cytosol mM | Vacuole | Reference |
|----------------------------|--------|---------------|---------|-------------------------------------|
| 3-Phosphoglycerate | 4.3 | 4.2 | ≤0.01 | Gerhardt et al. 1987 |
| Dihydroxyacetone-phosphate | 0.21 | 0.57 | ≤0.001 | Gerhardt et al. 1987 |
| Fructose-1,6-bisphosphate | 0.55 | 0.14 | ≤0.001 | Gerhardt et al. 1987 |
| Fructose-6-phosphate | 0.57 | 2.0 | ≤0.003 | Gerhardt et al. 1987 |
| Glucose-6-phosphate | 0.60 | 5.9 | ≤0.005 | Gerhardt et al. 1987 |
| UDP-glucose | 0.07 | 1.7 | ≤0.007 | Gerhardt et al. 1987 |
| Sucrose | ≤0.8 | 53 | 11 | Gerhardt et al. 1987 |
| Malate | 1.2 | 0.8 | 6.8 | Heincke et al. 1991 |
| 2-Oxoglutarate | 0.07 | 0.41 | 0.006 | Heincke et al. 1991 |
| Aspartate | 14 | 23 | 0.87 | Riens et al. 1991 |
| Asparagine | 1.1 | 1.5 | 0.08 | Riens et al. 1991 |
| Glutamate | 14 | 21 | 0.55 | Riens et al. 1991 |
| Glutamine | 20 | 24 | 0.58 | Riens et al. 1991 |
| Alanine | 5.5 | 3.9 | 0.20 | Riens et al. 1991 |
| Serine | 4.3 | 7.5 | 0.43 | Riens et al. 1991 |
| Glycine | 0.6 | 1.8 | 0.13 | Riens et al. 1991 |
| Valine | 0.9 | 2.3 | 0.07 | Riens et al. 1991 |
| Σ Amino acids | 58 | 86 | 2.8 | Riens et al. 1991 |
| Nitrate | <4 | ≤8 | ≥25 | B. Riens, personal communication |