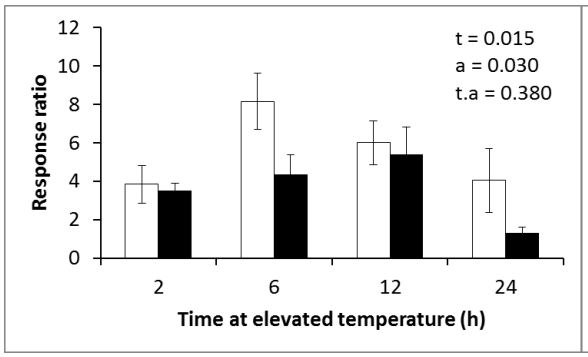
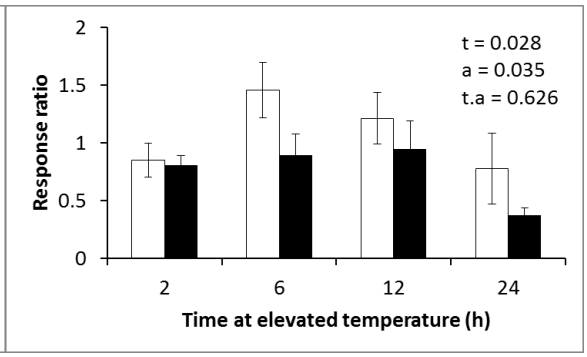
1. Metabolites significantly influenced by time

Sugars and related carbohydrates

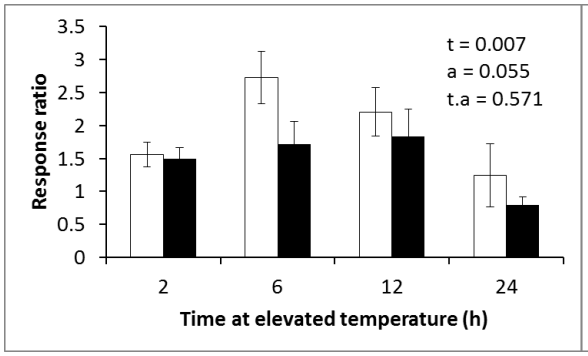
Glucose peak 1



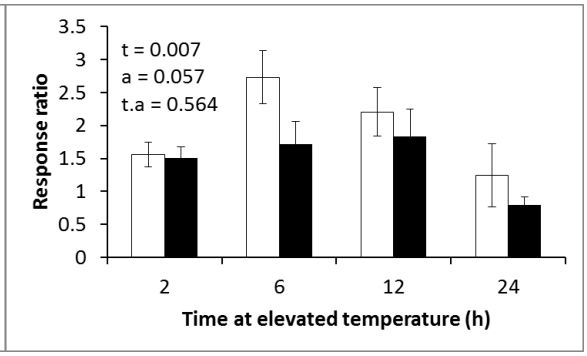
Glucose peak 2



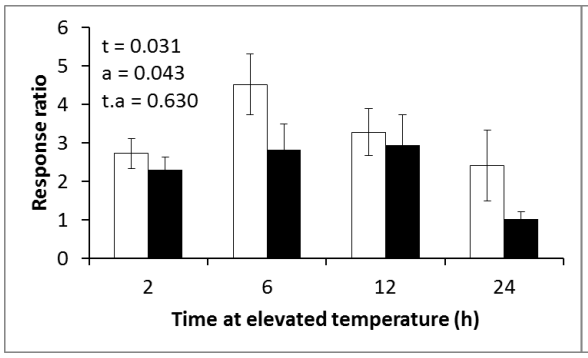
Unoximated glucose peak 1



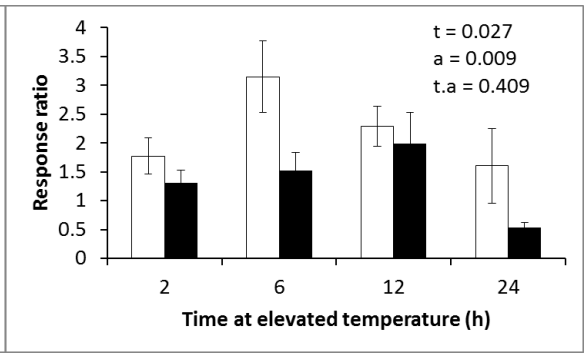
Unoximated glucose peak 2



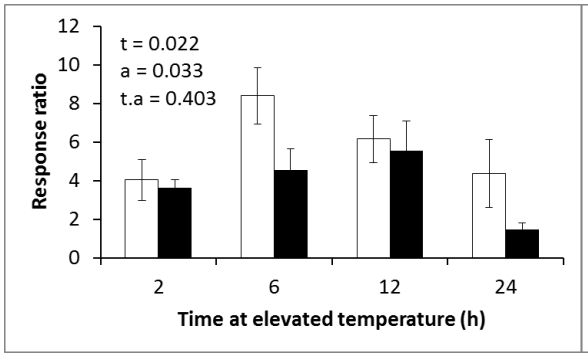
Fructose peak 1



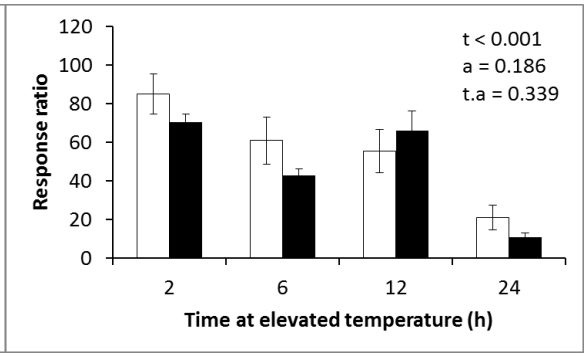
Fructose peak 2



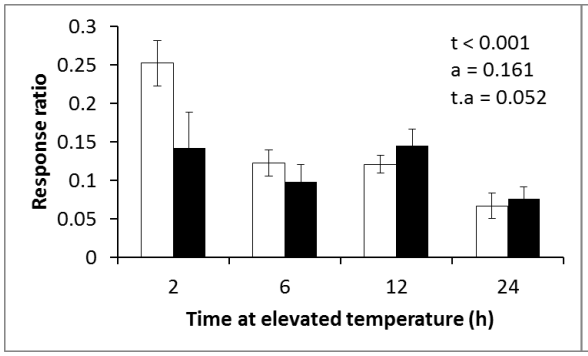
Glactose



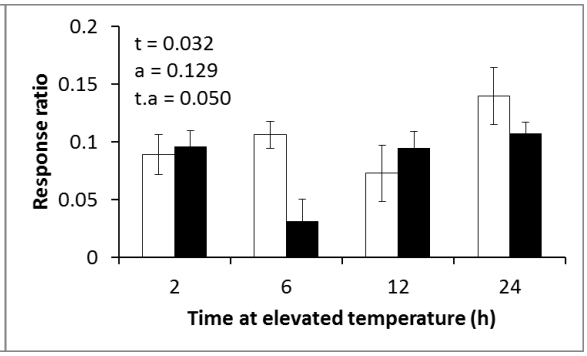
Sucrose



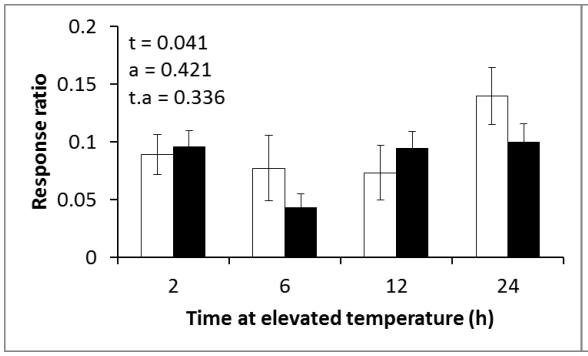
Maltose



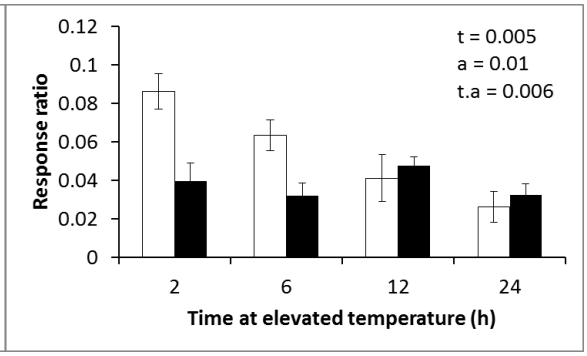
Mannitol



Sorbitol

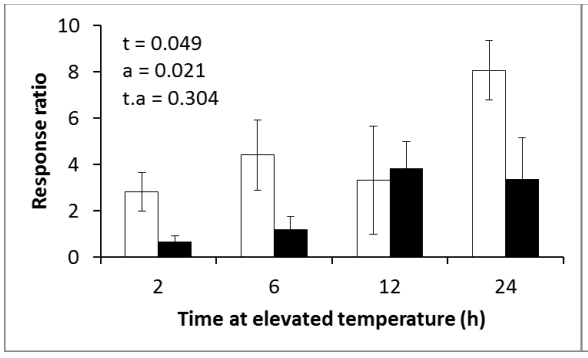


Dihydroxydihydrofuranone

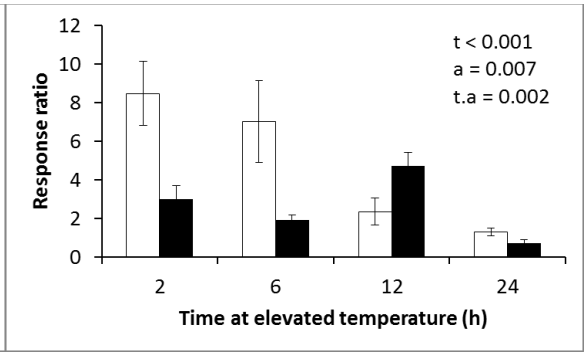


Organic acids

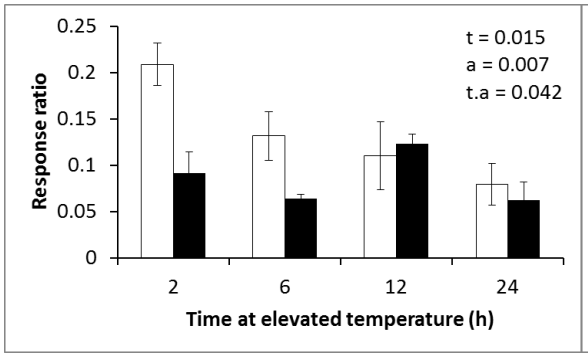
Citrate



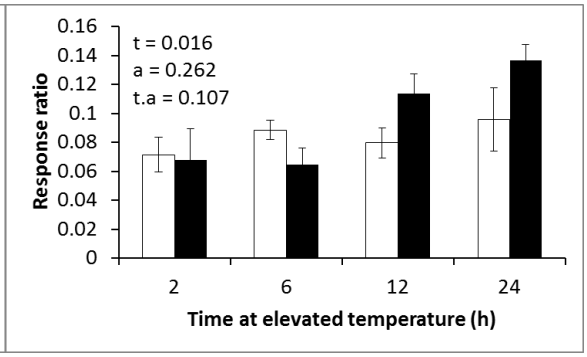
Malate



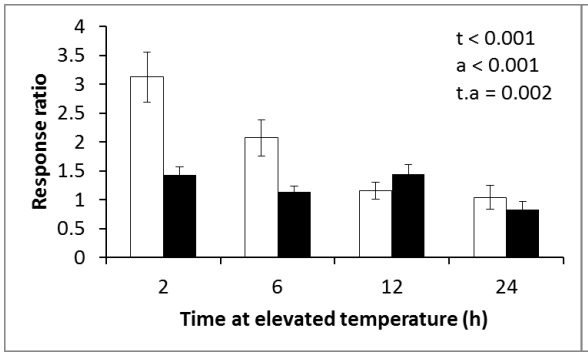
Threonate



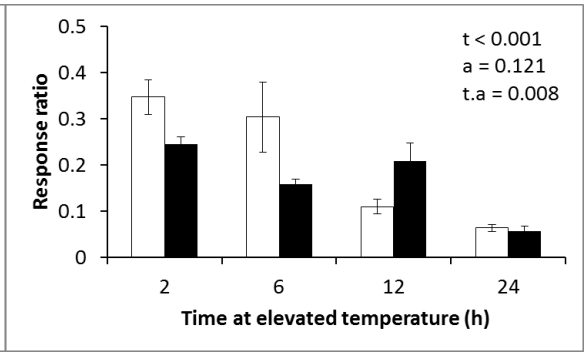
Trihydroxypentanoate



Quinate

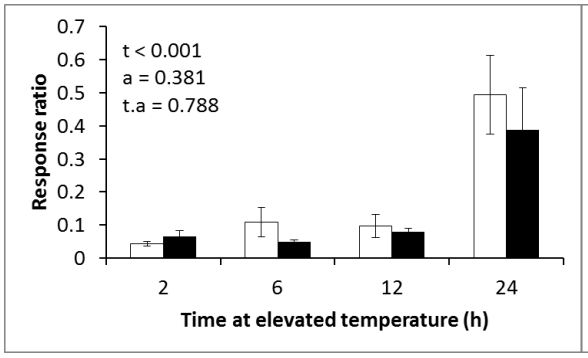


Glycerate

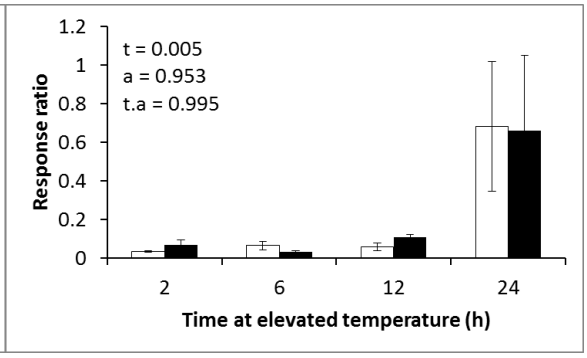


Amino acids and amines

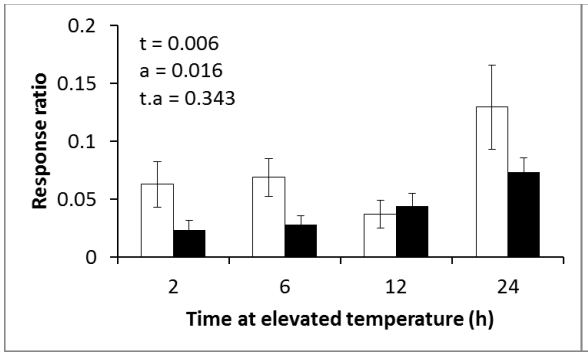
Asparagine peak 1



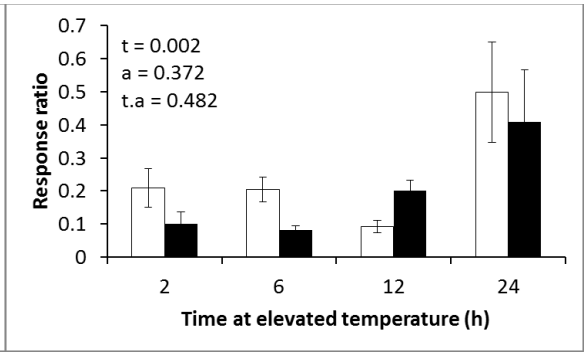
Asparagine peak 2



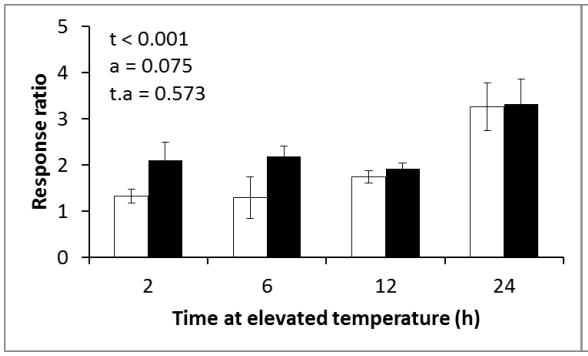
Glutamine peak 1



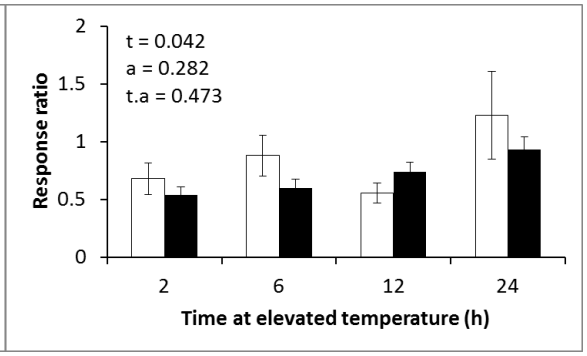
Glutamine peak 2



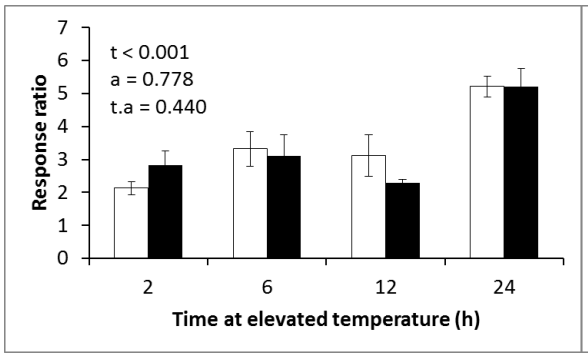
Serine



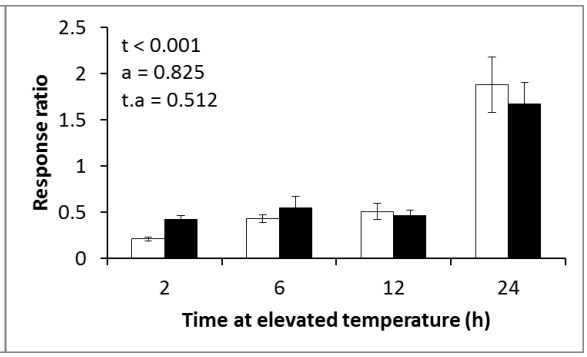
Glycine



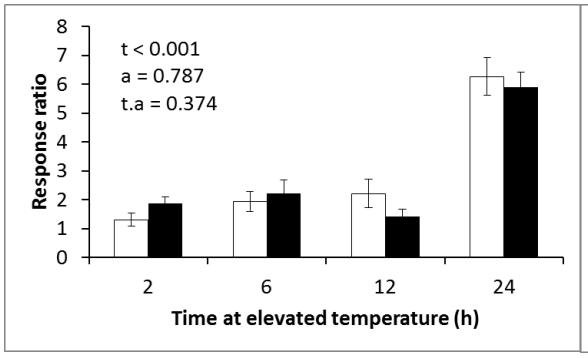
Phenylalanine



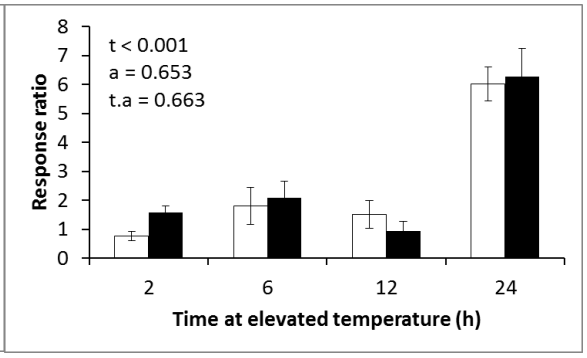
Tyrosine



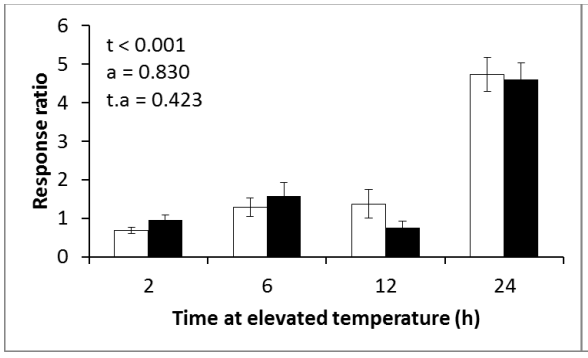
Valine



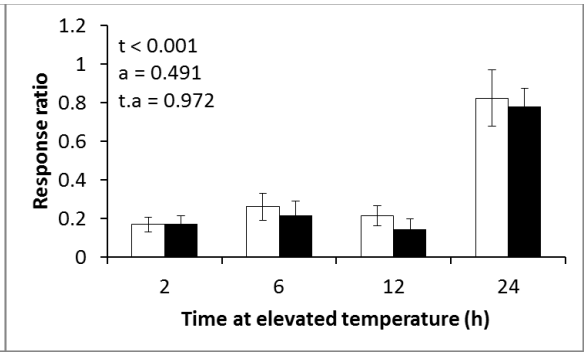
Leucine



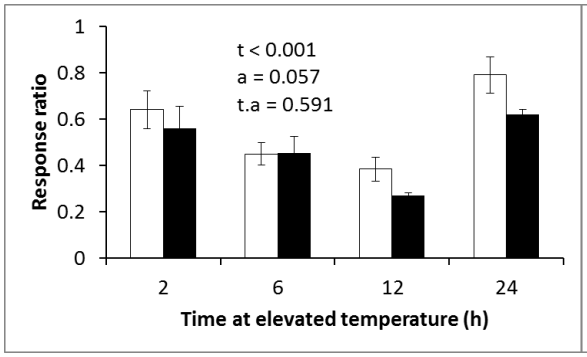
Isoleucine



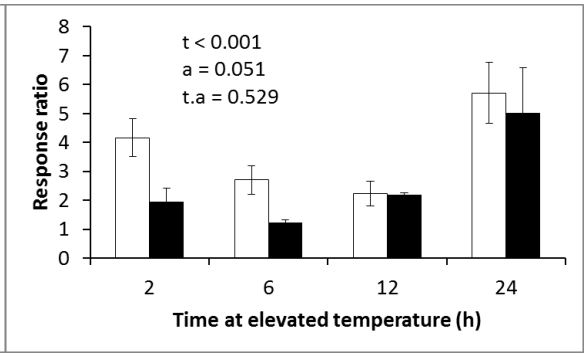
Lysine



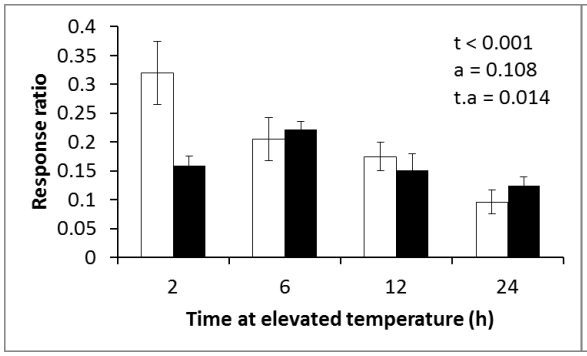
Threonine



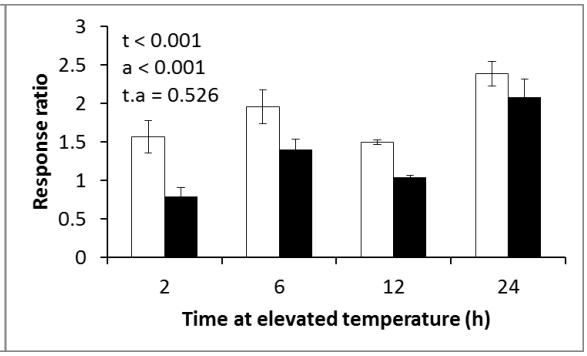
Aspartate



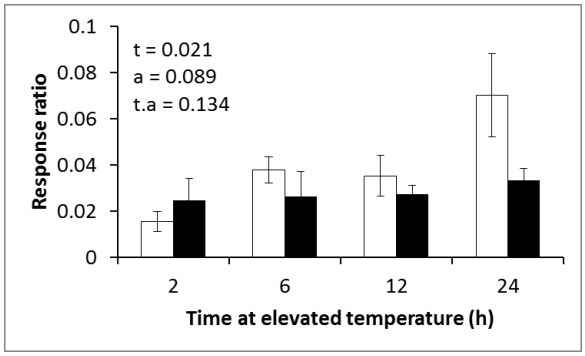
Spermidine



Putrescine

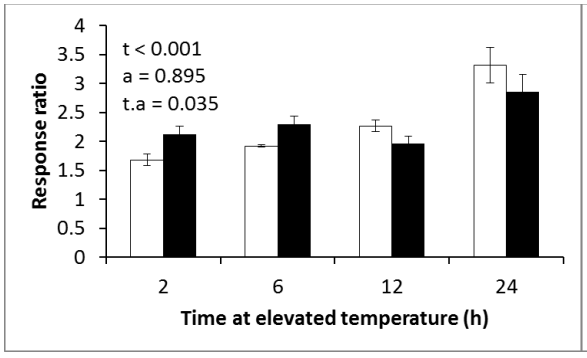


Allantoin peak 1

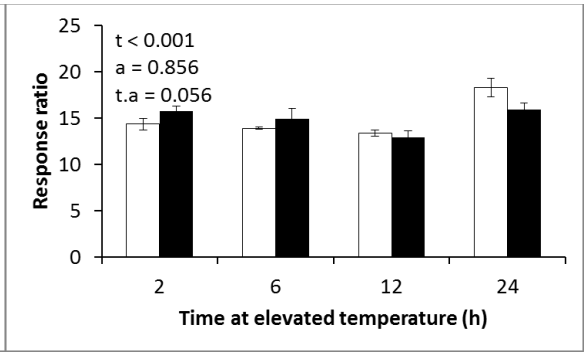


Fatty Acids

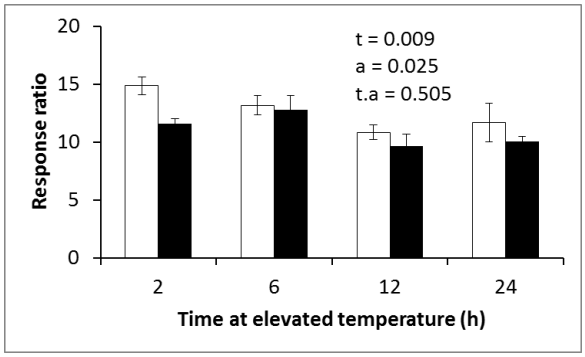
Tetradecanoic acid



Eicosanoic acid

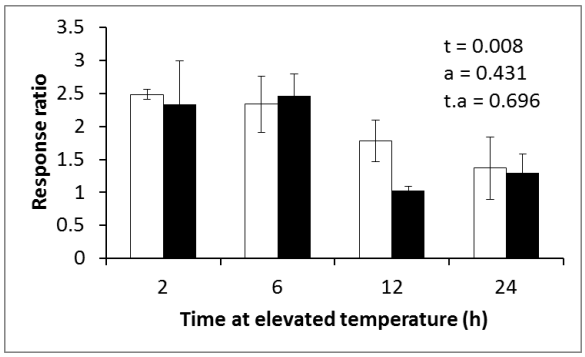


Docosanoic acid



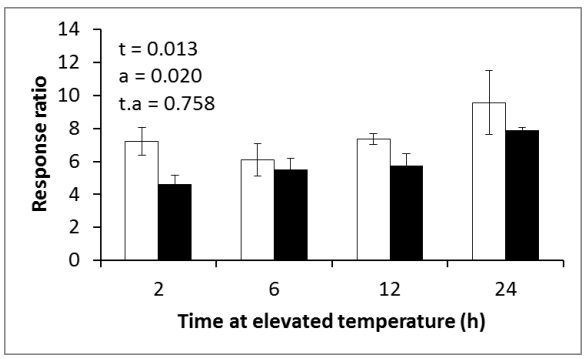
Fatty alcohols

Tetracosanol



Phytosterols

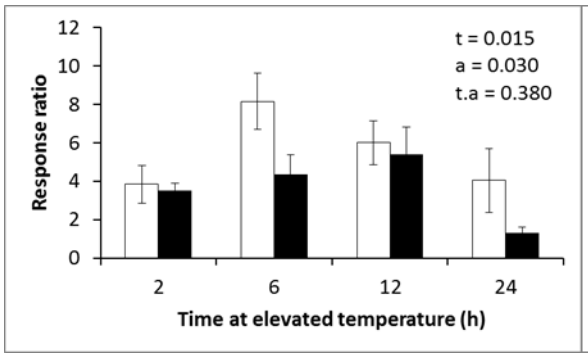
Stigmastadienol



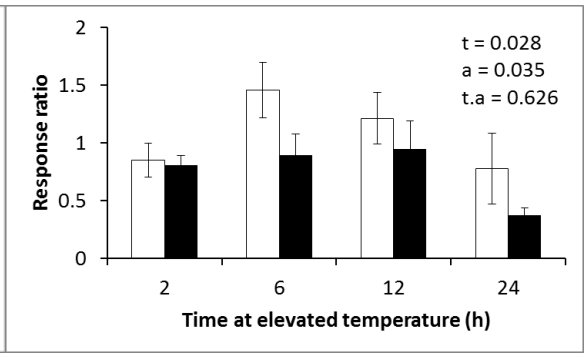
2. Metabolites significantly influenced by acclimation treatment

Sugars and related carbohydrates

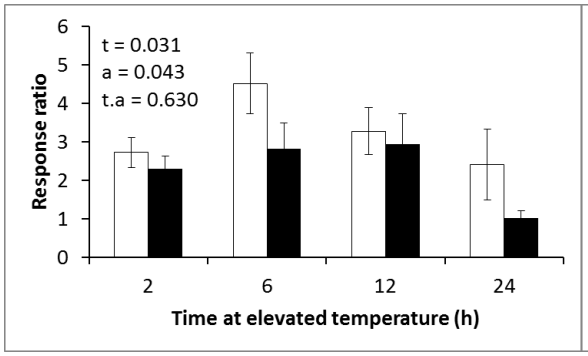
Glucose peak 1



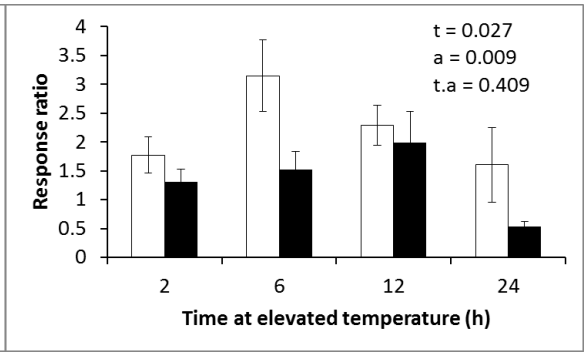
Glucose peak 2



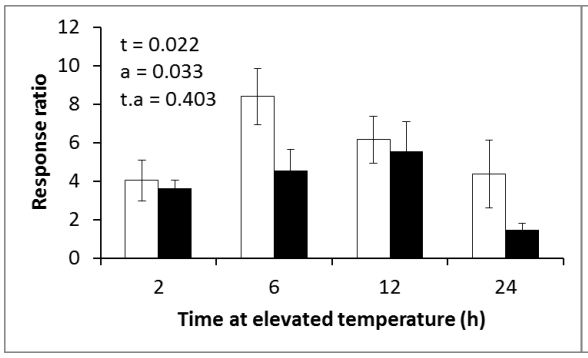
Fructose peak 1



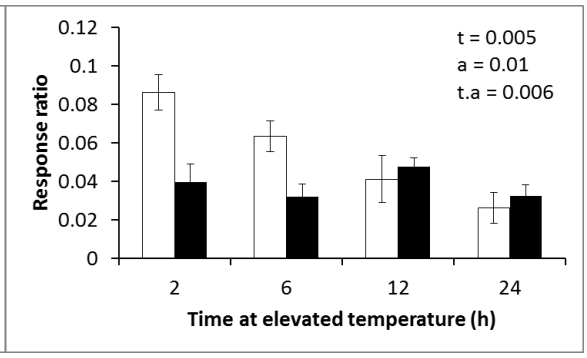
Fructose peak 2



Galactose

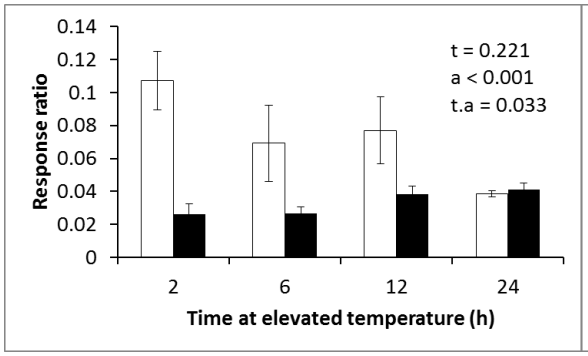


Dihydroxydihydrofuranone

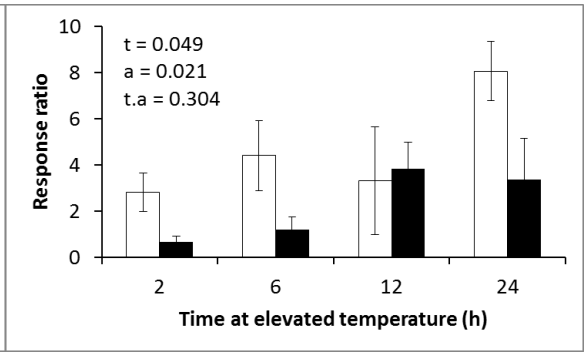


Organic acids

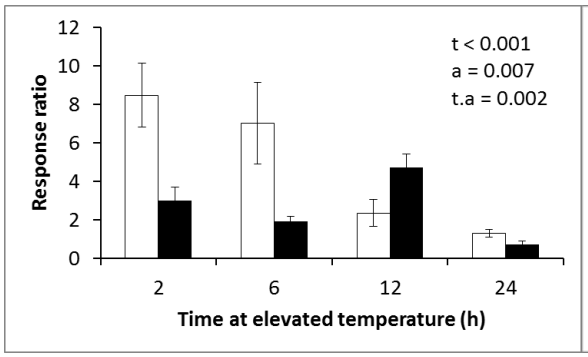
Succinate



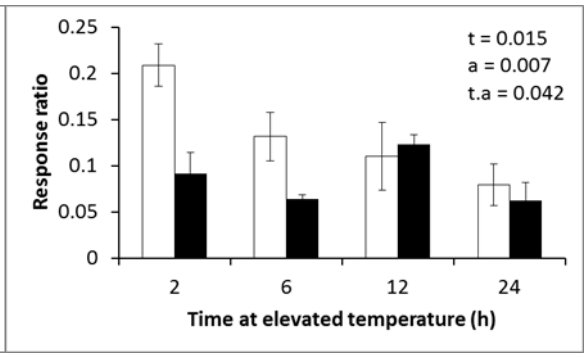
Citrate



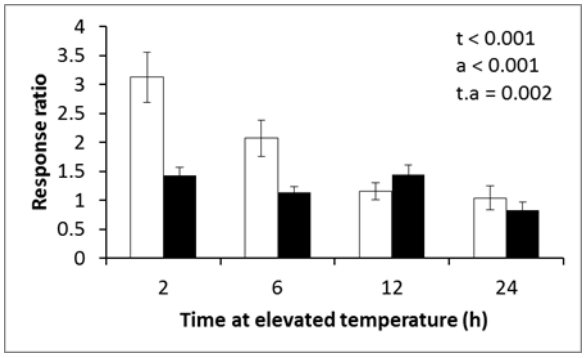
Malate



Threonate

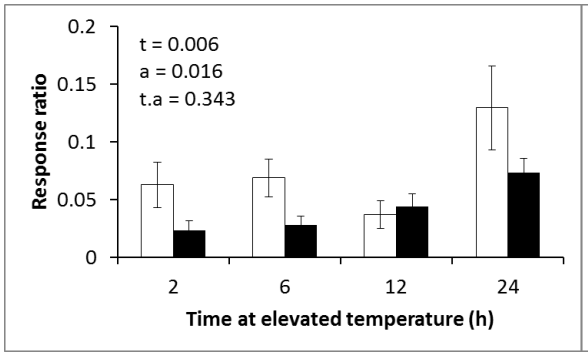


Quinate

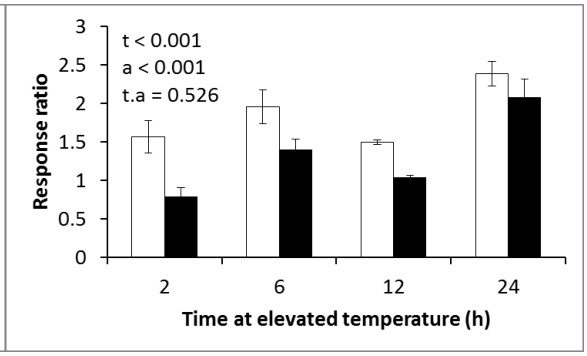


Amino acids and amines

Glutamine peak 1

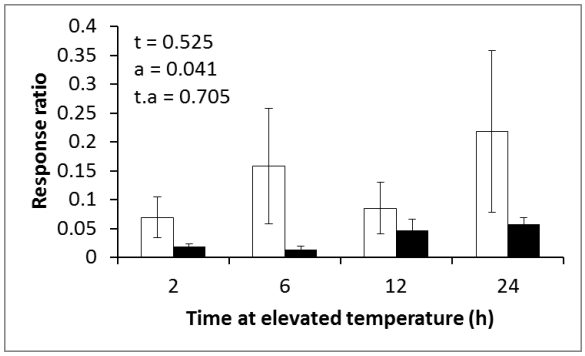


Putrescine



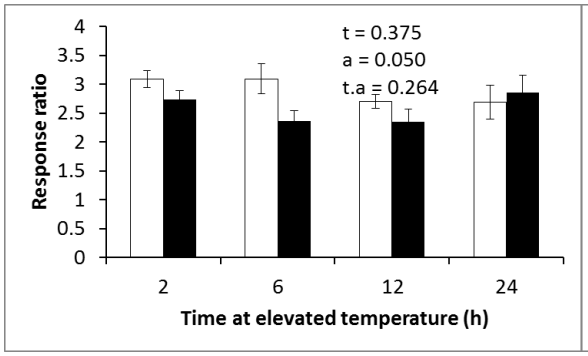
Phenolic acids

Chlorogenic acid

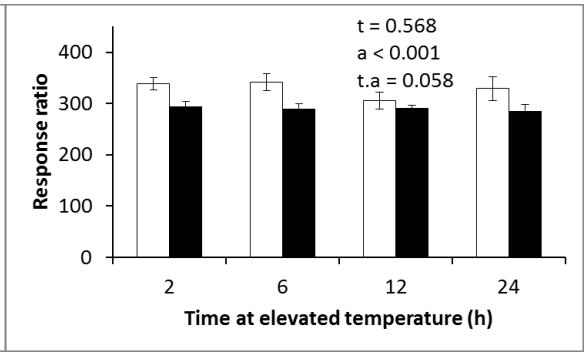


Fatty acids

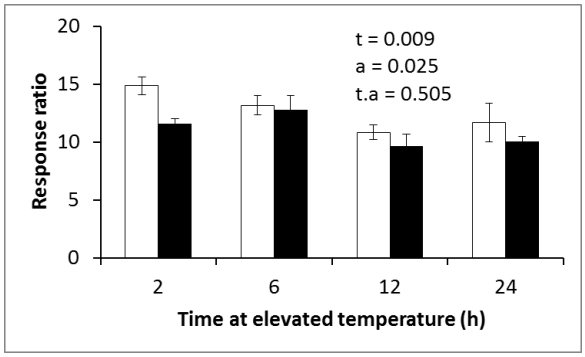
Octadecenoic acid



Linoleic acid

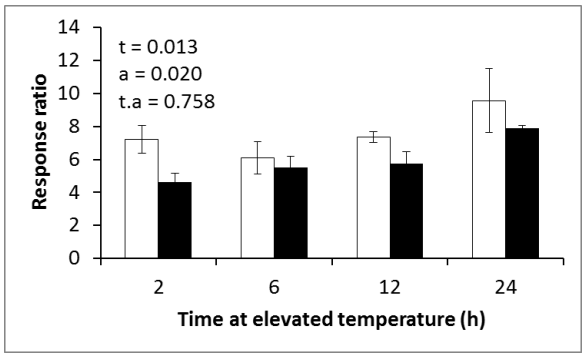


Docosanoic acid



Phytosterols

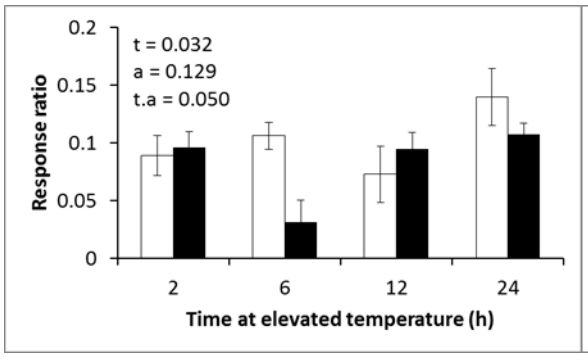
Stigmastadienol



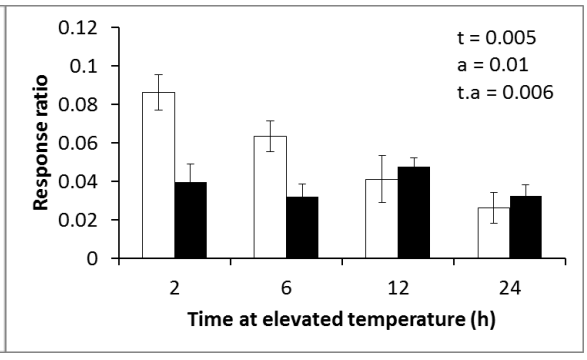
3. Metabolites significantly influenced by an interaction between time and acclimation

Sugars and related carbohydrates

Mannitol

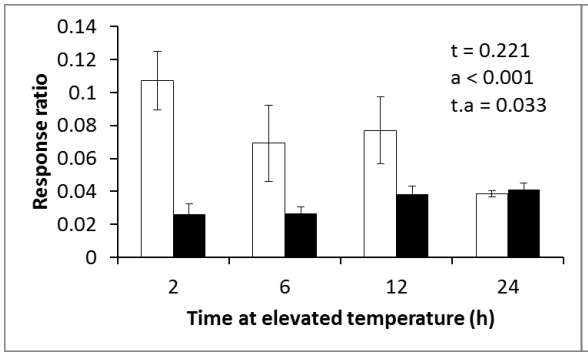


Dihydroxydihydrofuranone

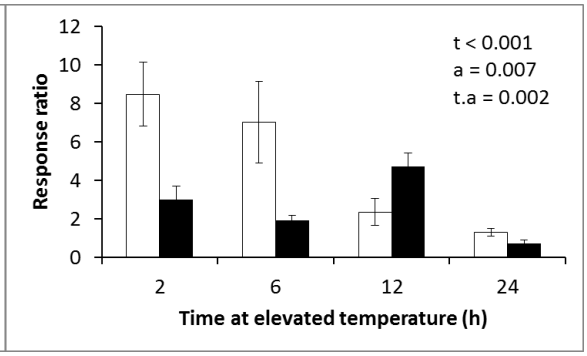


Organic acids

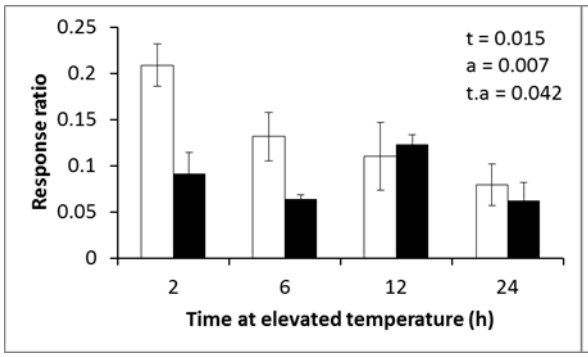
Succinate



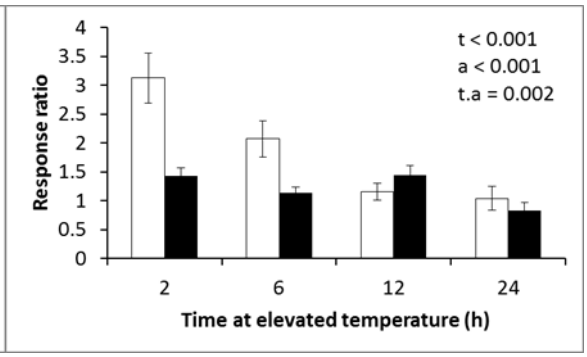
Malate



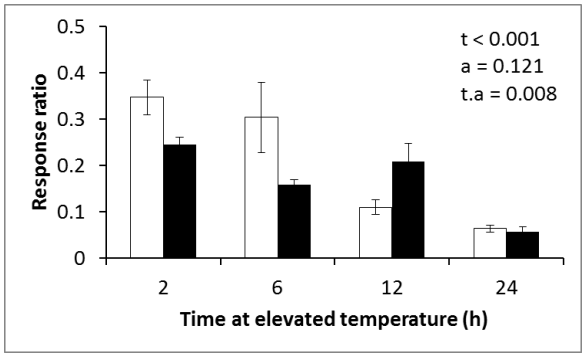
Threonate



Quinate

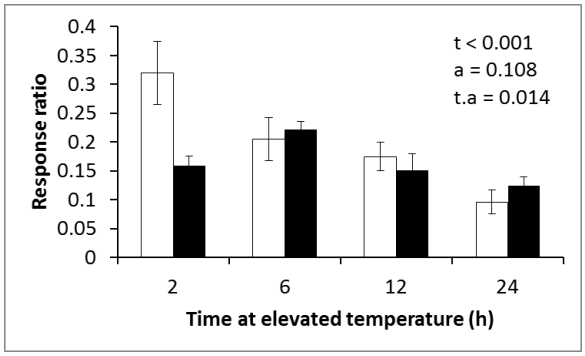


Glycerate



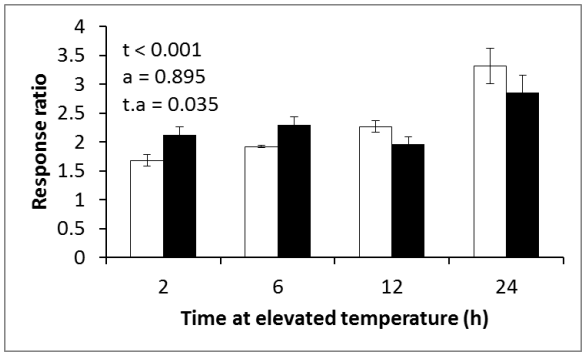
Amino acids and amines

Spermidine



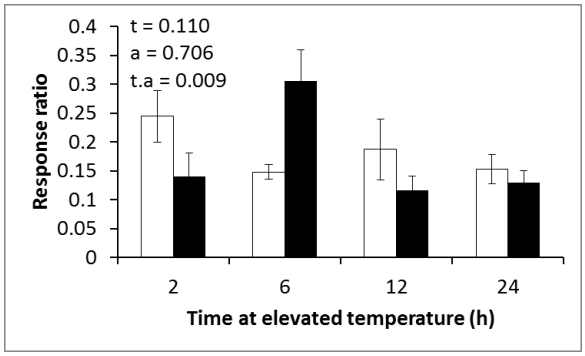
Fatty acids

Tetradecanoic acid



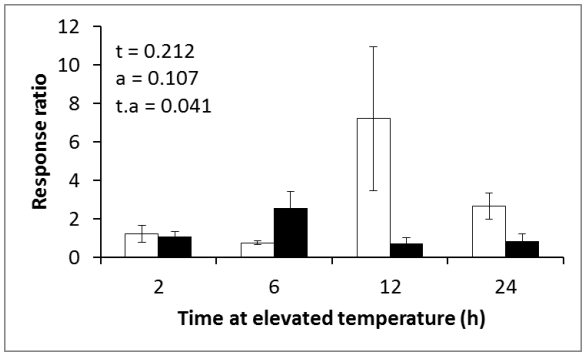
Fatty alcohols

Heneicosanol



Phytosterols

Avanasterol



Online Resource 8 Relative concentration of metabolites in acclimated and non-acclimated potato leaves following transfer to 40 °C

Concentrations of metabolites significantly altered by acclimation treatment, time at high temperature or an interaction of the two factors are indicated based in GC/MS peak area relative to the peak area of appropriate polar or non-polar internal standards (response ratio). Data for non-acclimated (open bars) or acclimated (closed bars) are indicated as mean ± SE (n = 3). P-values for two-way ANOVA based on time at 40 °C (t), prior acclimation treatment (a) or an interaction of the two factors (t.a) are indicated.

A Reversible Light and Genotype Dependent Acquired Thermotolerance Response Protects the Potato Plant from Excessive Temperature.

Planta

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