

# Hordenine cv Solist - Report

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## Adsorbimento

### Langmuir

```
##
## Formula:  $Y \sim Q * b * X / (1 + b * X)$ 
##
## Parameters:
##      Estimate Std. Error t value Pr(>|t|)
## Q 9.5242351  7.6177461    1.25   0.232
## b 0.0008688  0.0007896    1.10   0.290
##
## Residual standard error: 0.0696 on 14 degrees of freedom
##
## Algorithm "port", convergence message: relative convergence (4)
```

### Sigmoidal Langmuir

```
##
## Formula:  $Y \sim Q * b * X / (1 + b * X + s/X)$ 
##
## Parameters:
##      Estimate Std. Error t value Pr(>|t|)
## Q 10.5441460  9.7792422    1.078   0.301
## b  0.0007712  0.0008029    0.960   0.354
## s -0.5348174  0.6217583   -0.860   0.405
##
## Residual standard error: 0.0714 on 13 degrees of freedom
##
## Algorithm "port", convergence message: relative convergence (4)
```

### Freundlich

```
##
## Formula:  $Y \sim K * (X)^{(1/n)}$ 
##
## Parameters:
##      Estimate Std. Error t value Pr(>|t|)
## K  0.01325    0.00372    3.561 0.00313 **
## n  1.13633    0.07250   15.673 2.84e-10 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.06443 on 14 degrees of freedom
##
## Algorithm "port", convergence message: relative convergence (4)
```

## Sips

```
##
## Formula:  $Y \sim (K_s * (X)^{B_s}) / (1 + a_s * (X)^{B_s})$ 
##
## Parameters:
##      Estimate Std. Error t value Pr(>|t|)
## Ks  0.03638    0.01236   2.943  0.01143 *
## Bs  0.50791    0.13301   3.819  0.00213 **
## as -0.04341    0.04012  -1.082  0.29891
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.05355 on 13 degrees of freedom
##
## Algorithm "port", convergence message: relative convergence (4)
```

## Redlich

```
##
## Formula:  $Y \sim K_r * X / (1 + a_r * (X)^g)$ 
##
## Parameters:
##      Estimate Std. Error t value Pr(>|t|)
## Kr  0.004104    0.006192   0.663  0.51908
## g  -0.129146    0.377059  -0.343  0.73744
## ar -0.828002    0.179205  -4.620  0.00048 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.0657 on 13 degrees of freedom
##
## Algorithm "port", convergence message: relative convergence (4)
```

Fig 1 - Adsorption isotherms plot

Non-linearized isotherm adsorption models - Hordenine in Quarryfield soil

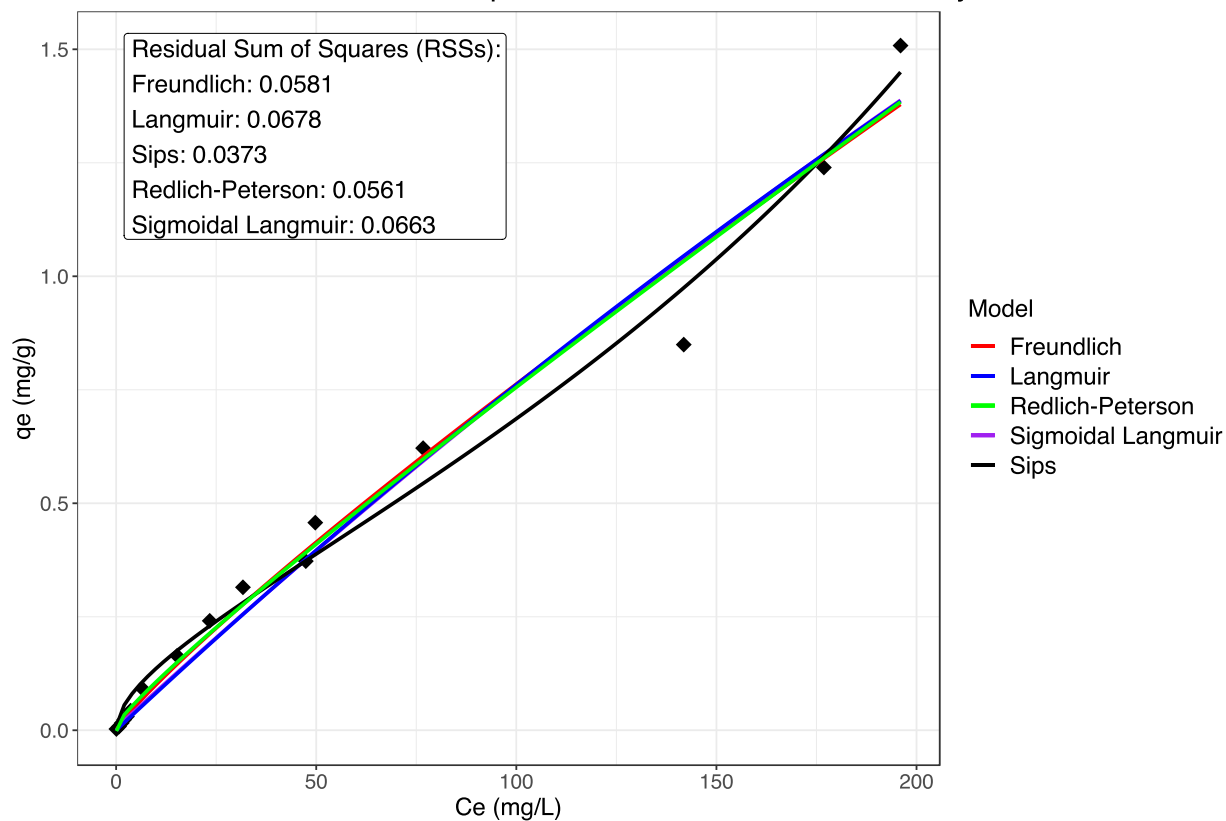


Fig 2 - Time Course 24h

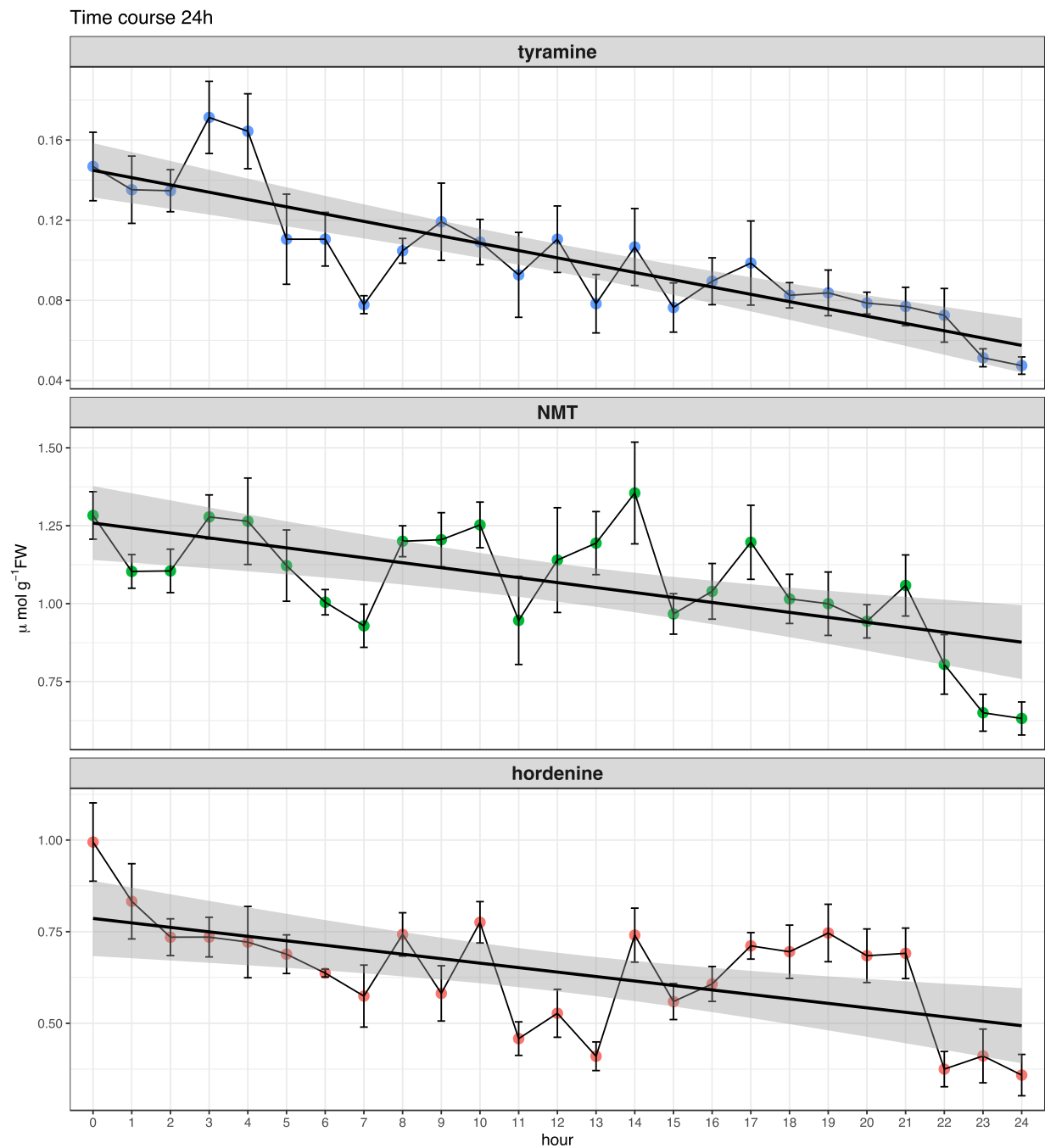
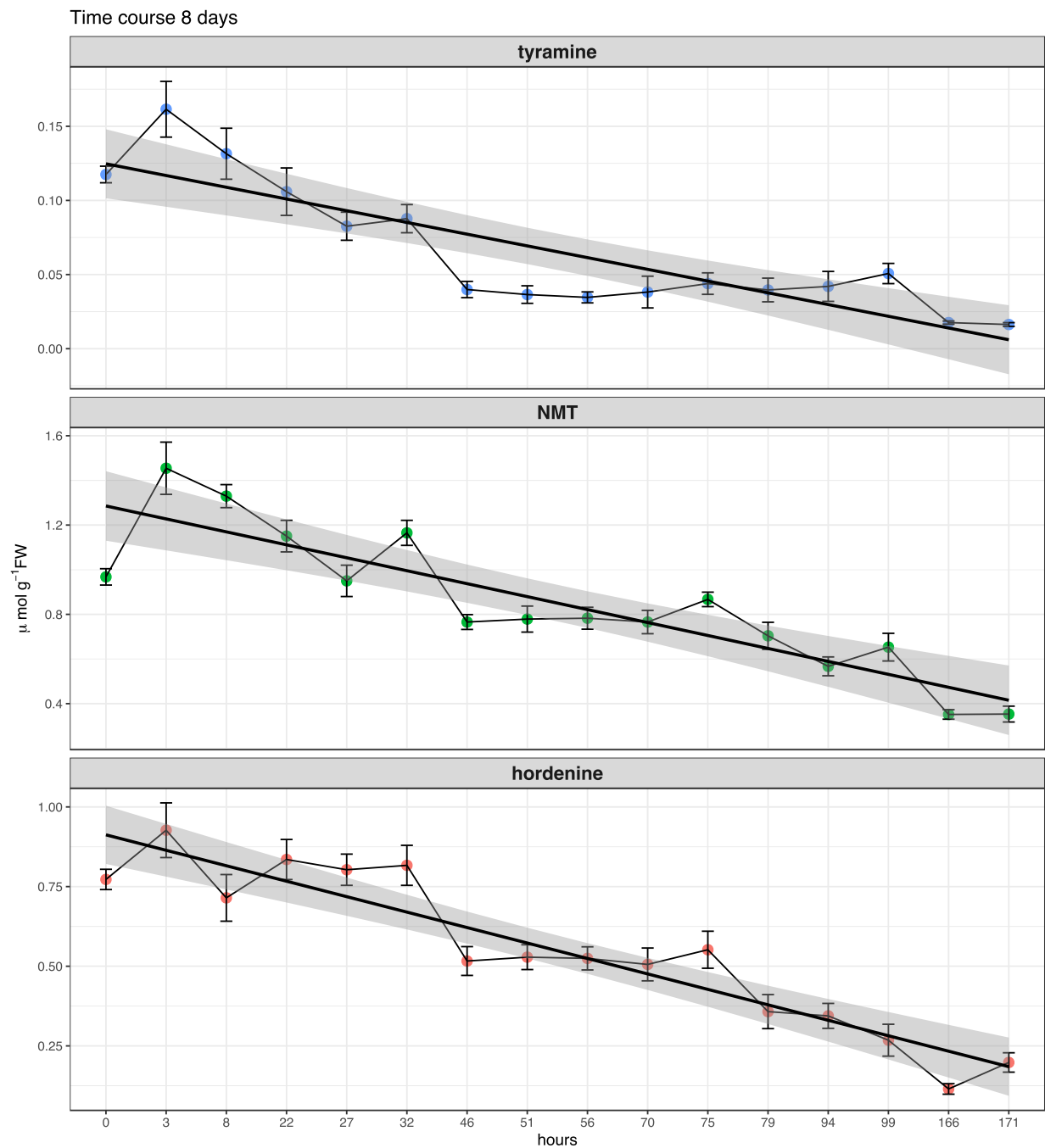


Fig 3 - Time Course 8 days



# Fig 4 - Time Course in Nutrients Deficiency

Time course Nutrient deficiencies

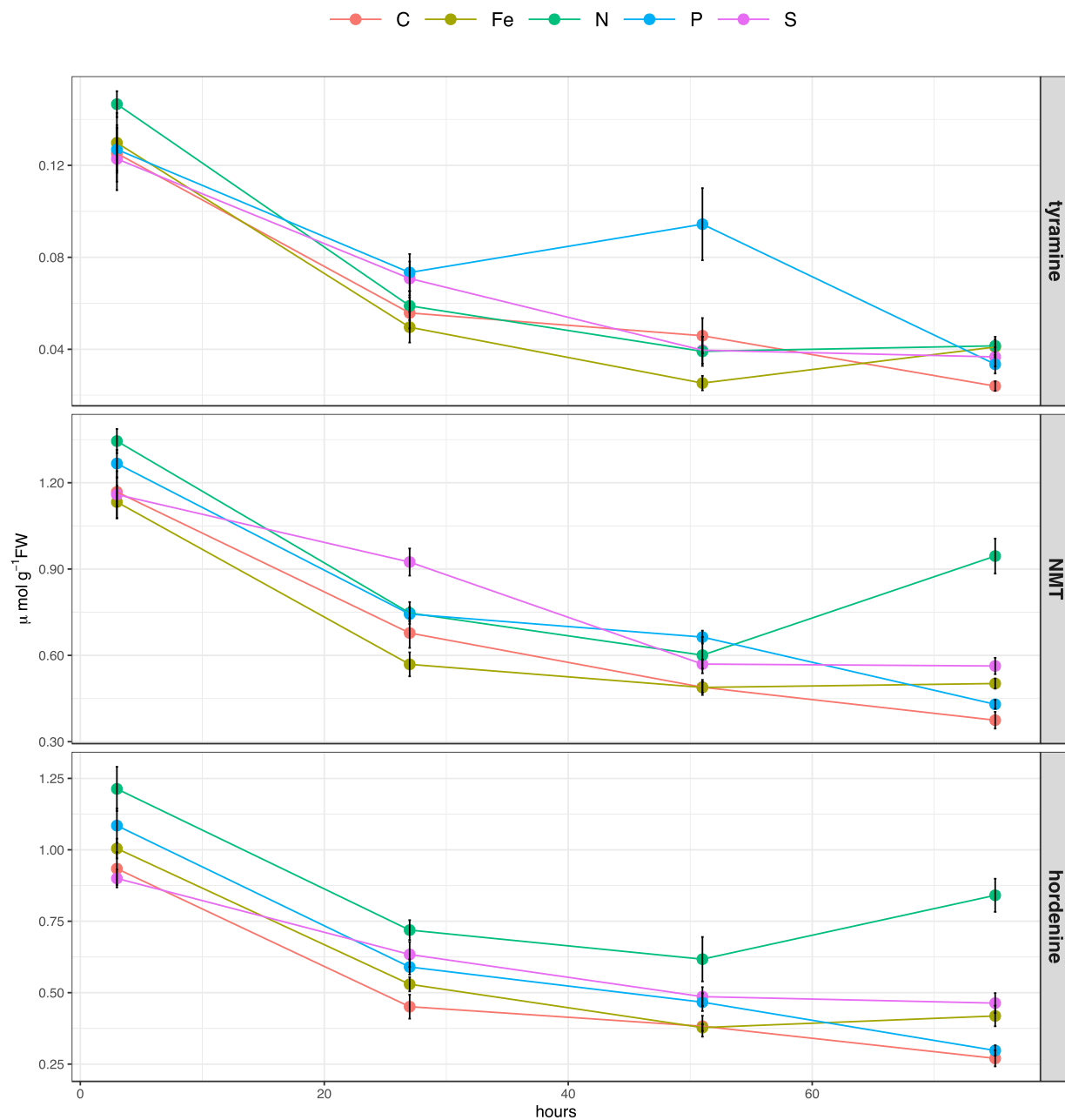


Fig 5 - Targeted metabolomic of Time Course in Nutrients Deficiency

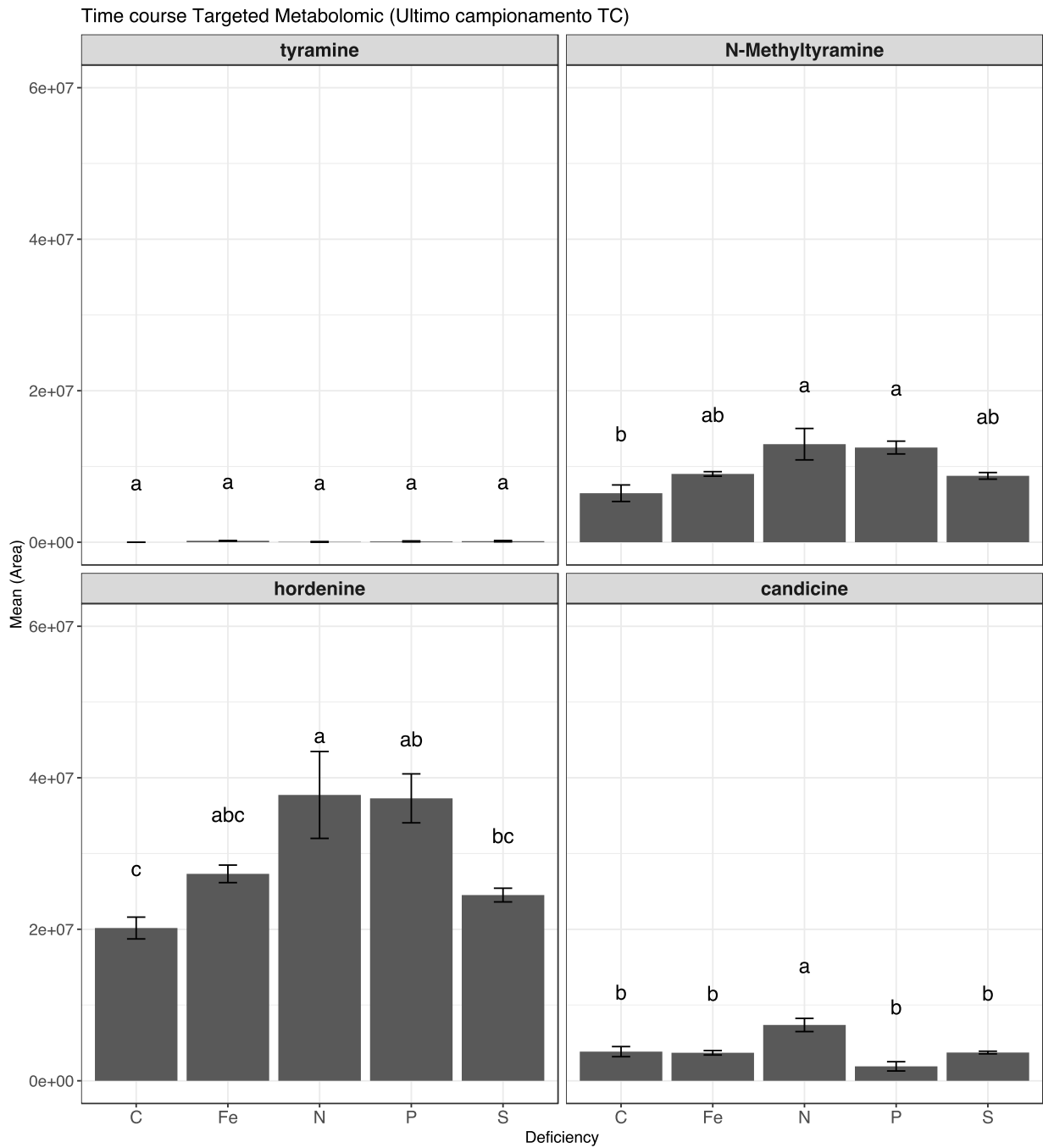


Fig 6 - Untargeted metabolomic (Fold Change Biosynthesis) of Time Course in Nutrients Deficiency

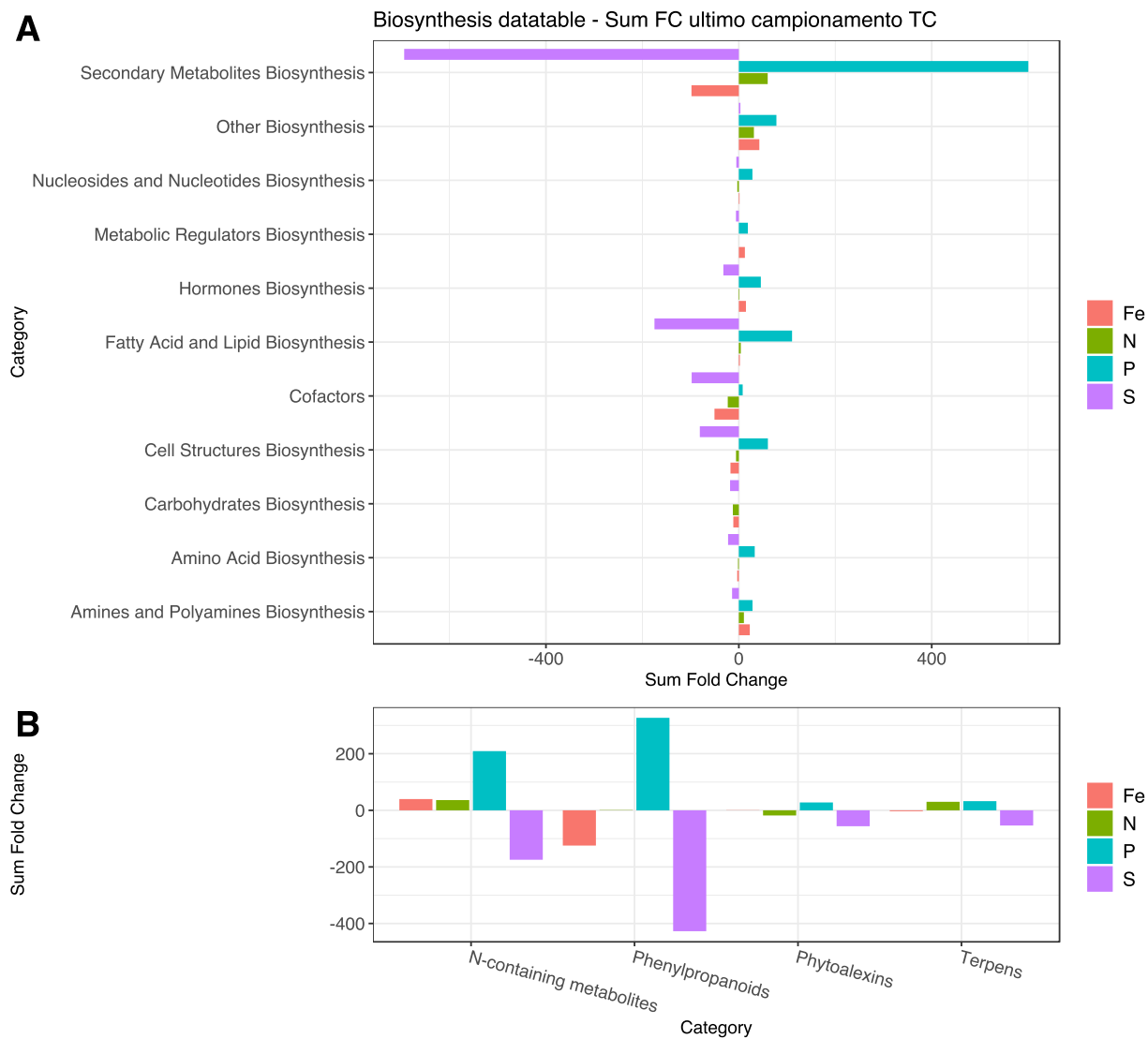


Table 1 - Root Exudates

Days	Tyramine (nmol g <sup>-1</sup> )	N-methyltyramine (nmol g <sup>-1</sup> )	Hordenine (nmol g <sup>-1</sup> )
0	11.4 (± 0.64)	83.85 (± 8.57)	102.55 (± 10.22)
3	0.11 (± 0.01)	1.38 (± 0.09)	1.23 (± 0.22)