

Supplementary Material

ANOVA – First set of experiments – Ventura & Oliveira

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> anova(model1)
Type III Analysis of Variance Table with Satterthwaite's method
      Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
Tratamento      0.4359  0.1453      3    136  0.8919 0.4471491
Tempo            12.4954 12.4954      1    136 76.7087 6.945e-15 ***
Tratamento:Tempo  3.6843  1.2281      3    136  7.5391 0.0001054 ***
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> summary(model1)
Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']
Formula: Densidade ~ Tratamento * Tempo + (1 | Aquário)
Data: Tabela.3.coleta

REML criterion at convergence: 192

Scaled residuals:
    Min       1Q   Median       3Q      Max
-2.7213 -0.4366  0.1917  0.5565  2.1006

Random effects:
 Groups Name      Variance Std.Dev.
Aquário (Intercept) 0.0000  0.0000
Residual            0.1629  0.4036
Number of obs: 144, groups: Aquário, 3

Fixed effects:
              Estimate Std. Error      df t value Pr(>|t|)
(Intercept)  1.873e+00  1.146e-01  1.360e+02  16.348 < 2e-16 ***
TratamentoD  2.494e-01  1.620e-01  1.360e+02   1.539 0.126168
TratamentoF  1.991e-01  1.620e-01  1.360e+02   1.229 0.221299
TratamentoFD 1.279e-01  1.620e-01  1.360e+02   0.790 0.431175
Tempo        -1.223e-02  3.283e-03  1.360e+02  -3.724 0.000286 ***
TratamentoD:Tempo -1.473e-02  4.644e-03  1.360e+02  -3.171 0.001875 **
TratamentoF:Tempo  6.718e-03  4.644e-03  1.360e+02   1.447 0.150277
TratamentoFD:Tempo -5.957e-04  4.644e-03  1.360e+02  -0.128 0.898117
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Correlation of Fixed Effects:
      (Intr) TrtmnD TrtmnF TrtmFD Tempo  TrtD:T TrtF:T
TratamentoD -0.707
TratamentoF -0.707  0.500
TratamentoFD -0.707  0.500  0.500
Tempo        -0.810  0.572  0.572  0.572
TrtmntD:Tmp  0.572 -0.810 -0.405 -0.405 -0.707
TrtmntF:Tmp  0.572 -0.405 -0.810 -0.405 -0.707  0.500
TrtmntFD:Tm  0.572 -0.405 -0.405 -0.810 -0.707  0.500  0.500
convergence code: 0
boundary (singular) fit: see ?issingular

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ANOVA – Second set of experiments – Ventura & Oliveira

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> model2<- lmer(Densidade ~ Tratamento * Tempo + (1|Aquário), data = Tabela.4.coleta)
> anova(model2)
Type III Analysis of Variance Table with Satterthwaite's method
      Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
Tratamento  26.257   8.752     3   398  30.461 < 2.2e-16 ***
Tempo       126.974 126.974     1   398 441.914 < 2.2e-16 ***
Tratamento:Tempo 14.302   4.767     3   398  16.592 3.545e-10 ***
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> summary(model2)
Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']
Formula: Densidade ~ Tratamento * Tempo + (1 | Aquário)
Data: Tabela.4.coleta

REML criterion at convergence: 703.4

Scaled residuals:
    Min       1Q   Median       3Q      Max
-2.2965 -0.6691 -0.0401  0.6948  2.4492

Random effects:
Groups Name          Variance Std.Dev.
Aquário (Intercept) 0.0599  0.2447
Residual            0.2873  0.5360
Number of obs: 408, groups: Aquário, 3

Fixed effects:
              Estimate Std. Error      df t value Pr(>|t|)
(Intercept)  2.397501   0.172198  4.111511 13.923 0.00013 ***
TratamentoD -0.053491   0.139178 398.000000  -0.384 0.70094
TratamentoF -0.166178   0.139178 398.000000  -1.194 0.23319
TratamentoFD -1.150676   0.139178 398.000000  -8.268 2.06e-15 ***
Tempo        -0.030334   0.002864 398.000000 -10.593 < 2e-16 ***
TratamentoD:Tempo -0.009331   0.004050 398.000000  -2.304 0.02174 *
TratamentoF:Tempo -0.006453   0.004050 398.000000  -1.593 0.11184
TratamentoFD:Tempo  0.016724   0.004050 398.000000   4.130 4.43e-05 ***
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Correlation of Fixed Effects:
              (Intr) TrtmnD TrtmnF TrtmFD Tempo  TrtD:T TrtF:T
TratamentoD -0.404
TratamentoF -0.404  0.500
TratamentoFD -0.404  0.500  0.500
Tempo         -0.481  0.595  0.595  0.595
TrtmntD:Tmp   0.340 -0.842 -0.421 -0.421 -0.707
TrtmntF:Tmp   0.340 -0.421 -0.842 -0.421 -0.707  0.500
TrtmntFD:Tm   0.340 -0.421 -0.421 -0.842 -0.707  0.500  0.500
> |

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