**Table 2. Analyses of variance of developmental time of 198 DGRP lines.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Analysis**  | **Source**  | **DF**  | **MS**  | ***F*-value**  | ***P***-**Value** | **Variance Component**  |
| **Developmental Time** | **ETOH\* + REGULAR**  | ***T*** | **1** | **2163.63** | **3113.55** | **<0.0001** | **Fixed** |
|   | ***L***  | **197** | **34.80** | **50.08** | **<0.0001**  | ***L*2 = 0.14** |
|   | ***L*×*T***  | **197** | **12.17** | **17.51** | **<0.0001**  | ***LT*2 = 0.14** |
|   | ***Error*** | **44110** | **0.70** |  |   | ***E*2 = 0.7** |
| **ETOH** | ***L***  | 197 | **18.73** | **4.15** | **<0.0001**  | ***L*2 = 0.3** |
|   | ***Error***  | **14732** | **0.69** |  |   | ***E*2 = 0.69**  |
| **REG** | ***L***  | **197** | **35.44** | **6.2** | **<0.0001**  | ***L*2 = 0.25** |
|   | ***Error***  | **29378** | **0.70** |  |   | ***E*2 = 0.7** |

*H2ETOH+REG =* (0.14 +0.14/(0.14+0.14+0.7) = 0.29

*H2ETOH =* 0.3/(0.3+0.69) =0.3

*H2REG =* 0.26

*rT* =0.14/(0.14+0.14) = 0.5

**Table 3. Analyses of variance of viability of 201 DGRP lines.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Analysis**  | **Source**  | **DF**  | **MS**  | ***F*-value** | ***P***-**Value** | **Variance Component**  |
| **Egg to adult Viability** | **ETOH + REGULAR**  | ***T*** | **1** | **538188.42** | **2274.89** | **<0.0001** | **Fixed** |
|   | ***L***  | **200** | **3075.45** | **13.00** | **<0.0001** | ***L*2 = 173.72** |
|   | ***L*× *T***  | **200** | **947.27** | **4.00** | **<0.0001** | ***LT*2 = 107.84** |
|   | ***Error*** | **2306** | **236.58** |  |  | ***E*2 = 236.56** |
| **ETOH** | ***L***  | **200** | **1806.67** | **6.69** | **<0.0001** | ***L*2 = 228.05** |
|   | ***Error***  | **1301** | **269.86** |  |  | ***E*2 = 270.35** |
| **REG** | ***L***  | **200** | **2230.63** | **11.53** | **<0.0001** | ***L*2 = 334.59** |
|   | ***Error***  | **1005** | **193.49** |  |  | ***E*2 = 193.43** |

*H2ETOH+REG =* 0.54

*H2ETOH =* 0.46

*H2REG =* 0.46

*rT* =0.62

**Table 4. Analyses of variance of locomotor reactivity of 39 DGRP lines.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Analysis**  | **Source**  | **DF**  | **MS**  | ***F*-Value**  | ***P***-**Value** | **Variance Component**  |
| **Locomotor reactivity** | **ETOH + REGULAR**  | ***T*** | **1** | **103697.56** | **47.84** | **<0.0001** | **Fixed** |
|  | ***S*** | **1** | **132.00** | **1.65** | **0.2069** | **Fixed** |
|  | ***L*** | **38** | **5037.88** | **2.29** | **0.0059** | ***L*2 = 18.58** |
|  | ***S*×*F*** | **1** | **1.82** | **0.03** | **0.8613** | **Fixed** |
|  | ***L*×*S*** | **38** | **80.35** | **1.36** | **0.1733** | ***LS*2 = 0.27** |
|  | ***L*×*T*** | **38** | **2178.94** | **36.9** | **<0.0001** | ***LT*2 = 26.99** |
|   | ***L*×*T*×*S*** | **38** | **59.05** | **2.26** | **<0.0001** | ***LTS*2 = 0.83** |
|   | ***Error*** | **6047** | **26.14** |  |  | ***E*2 = 26.14** |
| **ETOH** | ***S*** | **1** | **52.35** | **0.76** | **0.3893** | **Fixed** |
|  | ***L***  | **38** | **941.06** | **13.63** | **<0.0001** | ***L*2 = 10.92** |
|  | ***L*×*S*** | **38** | **69.03** | **2.74** | **<0.0001** | ***LS*2 = 1.10** |
|  | ***Error***  | **3034** | **25.20** |  |  | ***E*2 = 25.20**  |
|  | ***S*** | **1** | **80.96** | **1.17** | **0.2871** | **Fixed** |
| **REG** | ***L***  | **38** | **6220.66** | **88.62** | **<0.0001** | ***L*2 = 80.38** |
|  | ***L*×*S*** | **38** | **70.19** | **2.59** | **<0.0001** | ***LS*2 = 1.10** |
|  | ***Error***  | **2974** | **27.10** |  |  | ***E*2 = 27.10**  |

*H2ETOH+REG =* (18.58 +0.27+26.99+0.83)/( 18.58 +0.27+26.99+0.83+26.14) = 0.64

*H2ETOH =* 0.32

*H2REG =* 0.75

*rT* =18.58/(18.58+26.99+0.83)=0.4

\*ETOH – flies grown on ethanol-supplemented food

 REGULAR – flies grown on regular food

DF – degrees of freedom

MS – Type III mean squares