**Appendices**

**Fig. A.** Pearson correlation between variables measured in the open field test. Pearson's coefficient of correlation between variables are indicated.

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**Table A** Liver concentration in 21 polycyclic aormatic hydrocarbons

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  | **Concentration ± sem (ng g-1 dw) at 1 day post-exposure** |
| **Ring number** | **PAHs** | **Detection limit (ng g-1 dw)** | **Quantification limit (ng g-1 dw)** | **Control** | **EL** | **EM** | **EH** |
| **2** | **Naphthalene** | 90.1 | 270.3 | 59.0 | 1667.9 | 3781.5 | 29702.0 |
| **2** | **Benzothiophene** | 45.0 | 135.1 | <LOD | 15.4 | 39.0 | 403.7 |
| **2** | **Biphenyl**  | 90.1 | 270.3 | <LOD | 771.2 | 1475.1 | 5609.7 |
| **3** | **Acenaphthylene** | 45.0 | 135.1 | <LOD | <LOD | <LOD | <LOD |
| **3** | **Acenaphthene** | 45.0 | 135.1 | <LOD | 357.9 | 606.1 | 1920.2 |
| **3** | **Fluorene** | 45.0 | 135.1 | 26.9 | 2004.6 | 3099.2 | 11251.4 |
| **3** | **Dibenzothiophene** | 45.0 | 135.1 | 20.2 | 11330.0 | 17745.4 | 58928.7 |
| **3** | **Phenanthrene**  | 45.0 | 135.1 | 26.4 | 2268.7 | 3582.9 | 16608.2 |
| **3** | **Anthracene** | 4.5 | 13.5 | <LOD | 9.3 | 12.9 | 106.8 |
| **4** | **Fluoranthene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **4** | **Pyrene** | 9.0 | 27.0 | <LOD | <LOD | <LOD | 241.5 |
| **4** | **Benzo(a)anthracene** | 90.1 | 270.3 | <LOD | <LOD | <LOD | <LOD |
| **4** | **Chrysene** | 90.1 | 270.3 | 3.0 | <LOD | <LOD | 491.8 |
| **>4** | **Benzo(b+k)fluoranthene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Benzo(e)pyrene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Benzo(a)pyrene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Perylene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Indeno(1,2,3-cd)pyrene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Dibenzo(a,h)anthracene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
| **>4** | **Benzo(g,h,i)perylene** | 450.5 | 1351.4 | <LOD | <LOD | <LOD | <LOD |
|  | **Mean of individual's [21 PAH]** | 4247.7 | 12743.2 | 135.5 | 18425.1 | 30342.2 | 125264.1 |

**Table B** Backward stepwise reduction of the full model evaluating the relationship between, the trend of exploratory activity over time in the open-field test, the control and exposed condition of the high treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon exploratory activity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 0.55 | 0.74 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Time:Day |  | 1.31 | 0.27 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day |  | Treatment | 34.00 | <0.01 | \* |
| Time | 47.72 | <0.01 | \* |
| Day | 7.11 | <0.01 | \* |
| Treatment:Time | 19.97 | <0.01 | \* |
| Treatment:Day | 2.64 | <0.05 | \* |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).

**Table C** Backward stepwise reduction of the full model evaluating the relationship between, the trend of exploratory activity over time in the open-field test, the control and exposed condition of the medium treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon exploratory activity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 1.07 | 0.38 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Time:Day |  | 0.45 | 0.81 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day | Treatment:Day |  | 0.85 | 0.52 |  |
| Treatment + Time + Day + Treatment:Time | Day |  | 0.58 | 0.72 |  |
| Treatment + Time + Treatment:Time | Treatment:Time |  | 3.25 | 0.08 |  |
| Treatment + Time |  | Treatment | 5.34 | 0.02 | \* |
| Time | 68.28 | <0.01 | \* |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).

**Table D** Backward stepwise reduction of the full model evaluating the relationship between, the trend of exploratory activity over time in the open-field test, the control and exposed condition of the low treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon exploratory activity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 1.48 | 0.20 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Treatment:Day |  | 0.27 | 0.93 |  |
| Treatment + Time + Day + Treatment:Time + Time:Day | Treatment:Time |  | 0.05 | 0.82 |  |
| Treatment + Time + Day + Time:Day | Treatment |  | 0.17 | 0.68 |  |
| Time + Day + Time:Day | Time:Day |  | 0.84 | 0.52 |  |
| Time + Day | Day |  | 0.48 | 0.79 |  |
| Time |  | Time | 35.60 | <0.01 | \* |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).

**Table E** Backward stepwise reduction of the full model evaluating the relationship between, the trend over time in the time spent in the central zone (*TZoneC*) of the open-field test, the control and exposed condition of the high treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon *TZoneC*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 0.51 | 0.77 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Time:Day |  | 1.05 | 0.39 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day |  | Treatment | 7.86 | <0.01 | \* |
| Time | 5.45 | 0.02 | \* |
| Day | 2.04 | 0.11 |  |
| Treatment:Time | 10.36 | <0.01 | \* |
| Treatment:Day | 6.31 | <0.05 | \* |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).

**Table F** Backward stepwise reduction of the full model evaluating the relationship between, the trend over time in the time spent in the central zone (*TZoneC*) of the open-field test, the control and exposed condition of the medium treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon *TZoneC*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 0.65 | 0.66 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Treatment:Day |  | 0.46 | 0.81 |  |
| Treatment + Time + Day + Treatment:Time + Time:Day | Time:Day |  | 0.77 | 0.57 |  |
| Treatment + Time + Day + Treatment:Time | Day |  | 0.33 | 0.89 |  |
| Treatment + Time + Treatment:Time | Treatment:Time |  | 2.78 | 0.10 |  |
| Treatment + Time | Time |  | 0.13 | 0.72 |  |
| Treatment |  | Treatment | 6.11 | 0.02 | \* |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).

**Table G** Backward stepwise reduction of the full model evaluating the relationship between, the trend over time in the time spent in the central zone (*TZoneC*) of the open-field test, the control and exposed condition of the low treatment and the days post-exposure (days 1, 2, 3, 8, 9 and 10) upon *TZoneC*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Dropped term** | **Retained term** | **F-value** |  **p-value** |
| Treatment:Time:Day | Treatment:Time:Day |  | 0.65 | 0.66 |  |
| Treatment + Time + Day + Treatment:Time + Treatment:Day + Time:Day | Treatment: Time |  | <0.01 | 0.96 |  |
| Treatment + Time + Day + Treatment:Day + Time:Day | Treatment:Day |  | 0.34 | 0.89 |  |
| Treatment + Time + Day + Time:Day | Time:Day |  | 0.56 | 0.73 |  |
| Treatment + Time + Day | Time |  | 0.03 | 0.87 |  |
| Treatment + Day | Treatment |  | 0.55 | 0.46 |  |
| Day |  | Day | 1.22 | 0.30 |  |

Lines in the table represent the different steps of the backward stepwise reduction of the full model excluding non-significant interactions until the most parsimonious model is reached on the last line. \* Represents significant effects (p<0.05).