Table 1: Descriptive statistics of raw PAH measurements; non-detects not imputed, complete case analysis

The MEANS Procedure

| Variable                  | N  | N Miss | Mean       | Std Dev     | Median     | Minimum | Maximum       |
|---------------------------|----|--------|------------|-------------|------------|----------|---------------|
| adducts                  |    |        | 11.8343750| 3.1862213   | 11.500000  | 7.900000  | 22.9000000   |
| _1_Methylnaphthalene     | 47 | 6      | 5.9510638 | 8.3488058   | 3.880000   | 1.480000  | 46.9000000   |
| _2_Methylnaphthalene     | 53 | 0      | 6.5877358 | 9.4918510   | 5.250000   | 2.320000  | 72.4000000   |
| Acenaphthene             | 28 | 25     | 4.0982143 | 4.0138937   | 3.230000   | 1.770000  | 23.5000000   |
| Acenaphthylene           | 25 | 28     | 4.1456000 | 4.1753376   | 3.000000   | 1.700000  | 23.0000000   |
| Anthracene               | 49 | 4      | 3.8744898 | 1.5030387   | 3.710000   | 1.670000  | 10.3000000   |
| Benzo_a_anthracene       | 53 | 0      | 20.018962 | 17.0227661  | 16.300000  | 6.290000  | 124.0000000  |
| Benzo_a_pyrene           | 42 | 11     | 15.0242857| 6.7326265   | 15.050000  | 3.820000  | 31.3000000   |
| Benzo_b_fluoranthene     | 53 | 0      | 22.5716981| 10.7204544  | 21.300000  | 3.330000  | 66.5000000   |
| Benzo_gi_perylene        | 49 | 4      | 22.6674490| 9.7949063   | 21.100000  | 7.625000  | 68.5000000   |
| Benzo_k_fluoranthene     | 52 | 1      | 15.8488462| 5.2618049   | 15.300000  | 6.570000  | 29.6000000   |
| Chrysene                 | 53 | 0      | 38.5783019| 12.8428351  | 36.100000  | 14.200000| 65.6000000   |
| Dibenzo_a_h_anthracene   | 14 | 39     | 10.4217857| 4.8389094   | 9.125000   | 4.525000  | 20.6000000   |
| Dibenzofuran             | 48 | 5      | 5.9760417 | 6.9946112   | 4.520000   | 2.370000  | 41.8000000   |
| Fluoranthene             | 53 | 0      | 34.433962 | 11.1330406  | 32.700000  | 13.400000| 66.7000000   |
| Fluorene                 | 19 | 34     | 4.800000  | 5.3415260   | 2.900000   | 1.800000  | 20.5000000   |
| ieno_1_2_3_cd_pyrene     | 35 | 18     | 10.9688571| 4.7298189   | 9.860000   | 3.230000  | 25.7000000   |
| Naphthalene              | 53 | 0      | 13.1359434| 16.3082079  | 9.840000   | 3.890000  | 97.7000000   |
| Perylene                 | 49 | 4      | 16.5740816| 6.2898761   | 16.200000  | 2.430000  | 39.5000000   |
| Phenanthrene             | 53 | 0      | 20.8877358| 5.7459091   | 21.400000  | 10.100000| 35.6000000   |
| Pyrene                   | 53 | 0      | 28.5150943| 10.0684226  | 29.100000  | 10.750000| 68.4000000   |
| age                      | 53 | 0      | 50.5283019| 9.0076971   | 52.000000  | 30.000000| 68.0000000   |
The CORR Procedure

### Table 2: Correlation (rank) of PAH and adducts: complete case analysis

#### Simple Statistics

| Variable                  | N   | Mean  | Std Dev | Median | Minimum | Maximum |
|----------------------------|-----|-------|---------|--------|---------|---------|
| adducts                   | 32  | 11.83438 | 3.18622 | 11.50000 | 7.90000 | 22.90000 |
| _1_Methylnaphthalene      | 47  | 5.95106 | 8.34881 | 3.88000 | 1.48000 | 46.90000 |
| _2_Methylnaphthalene      | 53  | 6.58774 | 9.49185 | 5.25000 | 2.32000 | 72.40000 |
| Acenaphthene              | 28  | 4.09821 | 4.01389 | 3.23000 | 1.77000 | 23.50000 |
| Acenaphthylene            | 25  | 4.14560 | 4.17534 | 3.00000 | 1.70000 | 23.00000 |
| Anthracene                | 49  | 3.87449 | 1.50304 | 3.71000 | 1.67000 | 10.30000 |
| Benzo_a_anthracene        | 53  | 20.01896 | 17.02277 | 16.30000 | 6.29000 | 124.00000 |
| Benzo_a_pyrene            | 42  | 15.02429 | 6.73263 | 15.05000 | 3.82000 | 31.30000 |
| Benzo_b_fluoranthene      | 53  | 22.57170 | 10.72045 | 21.30000 | 3.33000 | 66.50000 |
| Benzo_ghi_perylene        | 49  | 22.66745 | 9.79491 | 21.10000 | 7.62500 | 68.50000 |
| Benzo_k_fluoranthene      | 52  | 15.84885 | 5.26180 | 15.30000 | 6.57000 | 29.60000 |
| Chrysene                  | 53  | 38.57830 | 12.84284 | 36.10000 | 14.20000 | 65.60000 |
| Dibenzo_a_h_anthracene    | 14  | 10.42179 | 4.83891 | 9.12500 | 4.52500 | 20.60000 |
| Dibenzofuran              | 48  | 5.97604 | 6.99461 | 4.52000 | 2.37000 | 41.80000 |
| Fluoranthene              | 53  | 34.43396 | 11.13304 | 32.70000 | 13.40000 | 66.70000 |
| Fluorene                  | 19  | 4.80000 | 5.34153 | 2.90000 | 1.80000 | 20.50000 |
| Ieno_1_2_3_cd_perylene    | 35  | 10.96886 | 4.72982 | 9.86000 | 3.23000 | 25.70000 |
| Naphthalene               | 53  | 13.13594 | 16.30821 | 9.84000 | 3.89000 | 97.70000 |
| Perylene                  | 49  | 16.57408 | 6.28988 | 16.20000 | 2.43000 | 39.50000 |
| Phenanthrene              | 53  | 20.88774 | 5.74591 | 21.40000 | 10.10000 | 35.60000 |
| Pyrene                    | 53  | 28.51509 | 10.06842 | 29.10000 | 10.75000 | 68.40000 |
### Table 2: Correlation (rank) of PAH and adducts: complete case analysis

The CORR Procedure

#### Spearman Correlation Coefficients

| adducts                  | _1_Methylnaphthalene | _2_Methylnaphthalene | Acenaphthene | Acenaphthylene | Anthracene |
|--------------------------|----------------------|----------------------|--------------|----------------|------------|
| adducts                  | 1.00000              | -0.00303             | -0.03498     | -0.23468       | 0.05029    |
| _1_Methylnaphthalene     | 0.20694              | 0.73012              | 0.36133      | 0.40500        | 0.43318    |
| _2_Methylnaphthalene     | 0.00303              | 0.73012              | 1.00000      | 0.43516        | 0.46582    |
| Acenaphthene             | -0.03498             | 0.36133              | 0.43516      | 1.00000        | 0.31298    |
| Acenaphthylene           | -0.23468             | 0.40500              | 0.35380      | 0.71779        | 0.33689    |
| Anthracene               | 0.05029              | 0.43318              | 0.31298      | 0.33689        | 1.00000    |
| Benzo_a_anthracene       | 0.16375              | 0.30991              | 0.0340      | 0.12303        | 0.49055    |
| Benzo_a_pyrene           | 0.03311              | 0.51728              | 0.52817      | 0.29630        | 0.43072    |
| Benzo_b_fluoranthene     | 0.05899              | 0.07751              | 0.37952      | 0.50234        | 0.17067    |
| Benzo_ghi_perylene       | 0.15001              | 0.30292              | 0.50234      | 0.17067        | 0.72295    |
| Benzo_k_fluoranthene     | 0.06877              | 0.08601              | 0.31442      | -0.08879       | 0.43314    |
| Chrysene                 | 0.15430              | 0.36643              | 0.41358      | -0.28456       | 0.41989    |
| Dibenzo_a_h_anthracene   | 0.15569              | 0.18785              | 0.22737      | 0.28834        | 0.1532     |
| Dibenzofuran             | -0.09722             | 0.23695              | 0.29630      | 0.15681        | 0.26468    |
| Fluoranthene             | 0.17897              | 0.17098              | 0.44561      | -0.08664       | 0.59100    |
| Fluorene                 | 0.17576              | 0.51775              | 0.64570      | 0.84404        | 0.33392    |
|                        | Benzo_a_anthracene | Benzo_a_pyrene | Benzo_b_fluoranthene | Benzo_ghi_perylene |
|------------------------|--------------------|----------------|-----------------------|---------------------|
| adducts                | 0.16375            | 0.03311        | 0.05899               | 0.15001             |
|                        | 0.3705             | 0.8752         | 0.7485                | 0.4373              |
|                        | 32                 | 25             | 32                    | 29                  |
| _1_Methylnaphthalene   | 0.30991            | 0.51728        | 0.07751               | 0.30029             |
|                        | 0.0340             | 0.0009         | 0.6046                | 0.0504              |
|                        | 47                 | 38             | 47                    | 43                  |
| _2_Methylnaphthalene   | 0.41444            | 0.52817        | 0.37952               | 0.50234             |
|                        | 0.0020             | 0.0003         | 0.0051                | 0.0002              |
|                        | 53                 | 42             | 53                    | 49                  |
| Acenaphthene           | -0.02382           | 0.18560        | -0.00616              | 0.16732             |
|                        | 0.9042             | 0.3965         | 0.9752                | 0.4139              |
|                        | 28                 | 23             | 28                    | 26                  |
| Acenaphthylene         | -0.19827           | 0.25934        | -0.12303              | 0.17067             |
|                        | 0.3421             | 0.2563         | 0.5580                | 0.4362              |
|                        | 25                 | 21             | 25                    | 23                  |
| Anthracene             | 0.49055            | 0.56484        | 0.41774               | 0.72295             |
|                        | 0.0003             | 0.0002         | 0.0028                | <0.001              |
|                        | 49                 | 38             | 49                    | 45                  |
| Benzo_a_anthracene     | 1.00000            | 0.74246        | 0.47207               | 0.52558             |
|                        | 49                 | 42             | 53                    | 49                  |
| Benzo_a_pyrene         | 0.74246            | 1.00000        | 0.53344               | 0.71216             |
|                        | <0.001             | 42             | 42                    | <0.001              |
| Benzo_b_fluoranthene   | 0.47207            | 0.53344        | 1.00000               | 0.61715             |
|                        | 0.0004             | 0.0003         | <0.001                | <0.001              |
|                        | 53                 | 42             | 53                    | 49                  |
| Benzo_ghi_perylene     | 0.52558            | 0.71216        | 0.61715               | 1.00000             |
|                        | 0.0001             | <0.001         | <0.001                | 49                  |
|                        | 49                 | 41             | 49                    | 49                  |
| Benzo_k_fluoranthene   | 0.39311            | 0.51127        | 0.56157               | 0.54625             |
|                        | 0.0039             | 0.0005         | <0.001                | <0.001              |
|                        | 52                 | 42             | 52                    | 49                  |
| Chrysene               | 0.90054            | 0.74987        | 0.43937               | 0.42714             |
|                        | <0.001             | <0.001         | 0.0010                | 0.0022              |
|                        | 53                 | 42             | 53                    | 49                  |
| Dibenzofuran           | 0.38631            | 0.12195        | 0.30684               | 0.19647             |
|                        | 0.1725             | 0.7372         | 0.2859                | 0.5008              |
|                        | 14                 | 10             | 14                    | 14                  |
| Dibenzofuran           | -0.01477           | -0.02553       | 0.09744               | 0.03456             |
|                        | 0.9206             | 0.8791         | 0.5100                | 0.8237              |
|                        | 48                 | 38             | 48                    | 44                  |
| Fluoranthene           | 0.66944            | 0.73086        | 0.75038               | 0.64861             |
|                        | <0.001             | <0.001         | <0.001                | <0.001              |
|                        | 53                 | 42             | 53                    | 49                  |
| Fluorene               | -0.10009           | 0.07307        | -0.05403              | 0.16493             |
|                        | 0.6835             | 0.7732         | 0.8261                | 0.5131              |
|                        | 19                 | 18             | 19                    | 18                  |
Table 2: Correlation (rank) of PAH and adducts: complete case analysis

## The CORR Procedure

### Spearman Correlation Coefficients

| Benzo_k_fluoranthene | Chrysene | Dibenzo_a_h_anthracene | Dibenzofuran | Fluoranthene | Flourene |
|-----------------------|----------|-------------------------|--------------|--------------|----------|
| adducts               |          |                         |              |              |          |
|                       | 0.06877  | 0.15430                 | 0.15569      | -0.09722     | 0.17897  |
|                       | 0.7132   | 0.3991                  | 0.7128       | 0.6226       | 0.3270   |
|                       | 0.31     | 0.32                     | 8            | 28           | 32       |
|                       | 0.5686   | 0.0113                  | 0.5389       | 0.1171       | 0.2505   |
|                       | 0.47     | 47                      | 13           | 45           | 47       |
|                       | 0.68     | 47                      | 13           | 45           | 47       |
|                       | 0.08601  | 0.36643                 | 0.18785      | 0.23695      | 0.17098  |
|                       | 0.5698   | 0.0113                  | 0.5389       | 0.1171       | 0.2505   |
|                       | 0.47     | 47                      | 13           | 45           | 47       |
|                       | 0.68     | 47                      | 13           | 45           | 47       |
|                       | 0.3144   | 0.41358                 | 0.22737      | 0.2963       | 0.4456   |
|                       | 0.0232   | 0.0021                  | 0.4344       | 0.0409       | 0.6457   |
|                       | 0.53     | 53                      | 14           | 48           | 53       |
|                       | 0.08879  | -0.12995                | 0.42169      | 0.43076      | -0.04929 |
|                       | 0.6799   | 0.1680                  | 0.2981       | 0.0280       | 0.3273   |
|                       | 0.25     | 28                      | 8            | 26           | 28       |
|                       | 0.31042  | 0.5099                  | 0.28834      | 0.1568       | -0.08664 |
|                       | 0.0115   | 0.0043                  | 0.4191       | 0.4749       | 0.8440   |
|                       | 0.53     | 53                      | 10           | 23           | 8        |
| Acenaphthene          |          |                         |              |              |          |
|                       | 0.341    | 0.40108                 | 0.41989      | 0.26648      | 0.5910   |
|                       | 0.0021   | 0.0043                  | 0.1532       | 0.0768       | 0.1623   |
|                       | 0.49     | 49                      | 13           | 45           | 49       |
|                       | 0.3931   | 0.90054                 | 0.38631      | -0.01477     | 0.6694   |
|                       | 0.0039   | <0.001                  | 0.1725       | 0.9206       | -0.1009  |
|                       | 0.53     | 53                      | 14           | 48           | 53       |
| Benzo_a_anthracene    |          |                         |              |              |          |
|                       | 0.51127  | 0.74987                 | 0.12195      | -0.02553     | 0.7308   |
|                       | 0.0005   | <0.001                  | 0.7372       | 0.8791       | <0.001   |
|                       | 0.42     | 42                      | 10           | 38           | 42       |
|                       | 0.56157  | 0.43937                 | 0.30684      | 0.09744      | 0.7508   |
|                       | <0.001   | 0.0010                  | 0.2859       | 0.5100       | <0.001   |
|                       | 0.53     | 53                      | 14           | 48           | 53       |
| Benzo_a_pyrene        |          |                         |              |              |          |
|                       | 0.5462   | 0.42714                 | 0.19647      | 0.03456      | 0.6486   |
|                       | <0.001   | 0.0022                  | 0.5008       | 0.8237       | <0.001   |
|                       | 0.49     | 49                      | 14           | 44           | 49       |
|                       | 1.0000   | 0.51866                 | 0.46409      | 0.24007      | 0.6778   |
|                       | <0.001   | <0.001                  | 0.0946       | 0.1041       | <0.001   |
|                       | 0.52     | 52                      | 14           | 47           | 52       |
| Chrysene              |          |                         |              |              |          |
|                       | 0.51866  | 1.00000                 | 0.36022      | 0.09087      | 0.7183   |
|                       | <0.001   | 0.5391                  | 0.2058       | 0.5391       | <0.001   |
|                       | 0.53     | 53                      | 14           | 48           | 53       |
|                       | 0.4640   | 0.36022                 | 1.00000      | 0.13380      | 0.47020  |
|                       | 0.0946   | 0.2058                  | 14           | 12           | 14       |
|                       | 0.52     | 52                      | 14           | 14           | 14       |
| Dibenzo_a_h_anthracene|          |                         |              |              |          |
|                       | 0.24007  | 0.09087                 | 0.13380      | 1.00000      | 0.1674   |
|                       | 0.1041   | 0.5391                  | 0.6785       | 0.16745      | 0.2553   |
|                       | 0.48     | 48                      | 12           | 48           | 48       |
| Dibenzofuran          |          |                         |              |              |          |
|                       | 0.6778   | 0.71833                 | 0.47020      | 0.16745      | 1.00000  |
|                       | <0.001   | 0.0898                  | 0.2553       | 0.05049      | 0.8374   |
|                       | 0.53     | 53                      | 14           | 48           | 53       |
| Fluoranthene          |          |                         |              |              |          |
|                       | -0.04004 | -0.07529                | -0.33333     | 0.59499      | 0.05049  |
|                       | 0.8707   | 0.7594                  | 0.6667       | 0.0092       | 0.8374   |
|                       | 19       | 19                      | 4            | 18           | 19       |
### Table 2: Correlation (rank) of PAH and adducts: complete case analysis

**The CORR Procedure**

#### Spearman Correlation Coefficients

|                                | Naphthalene | Phenanthrene | Pyrene |
|--------------------------------|-------------|--------------|--------|
| Ieno_1_2_3 cd_pyrene           | 0.38926     | 0.16385      | 0.17193|
| 18                             | 0.33915     | 0.01597      |        |
| 32                             | 0.37636     | 0.26332      |        |
| _1_Methylnaphthalene           | 0.46913     | 0.08797      |        |
| 0.0078                         | 0.56500     |              |        |
| 31                             | 0.1103      |              |        |
| 47                             | 0.2979      |              |        |
| _2_Methylnaphthalene           | 0.41866     | 0.042260     |        |
| 0.0123                         | 0.37374     |              |        |
| 35                             | 0.0576      |              |        |
| 53                             | 0.0576      |              |        |
| Acenaphthene                   | 0.26680     | 0.21194      |        |
| 0.2845                         | 0.30645     |              |        |
| 18                             | 0.16512     |              |        |
| 28                             | 0.1362      |              |        |
| Acenaphthylene                 | 0.30958     | 0.32878      |        |
| 0.2266                         | 0.46523     |              |        |
| 17                             | 0.0055      |              |        |
| 25                             | 0.0291      |              |        |
| Anthracene                     | 0.57017     | 0.68045      |        |
| 0.0007                         | 0.75429     |              |        |
| 32                             | 0.1362      |              |        |
| 49                             | 0.1086      |              |        |
| Benzo_a_anthracene             | 0.47840     | 0.48846      |        |
| 0.0037                         | 0.59144     |              |        |
| 35                             | 0.0389      |              |        |
| 53                             | 0.0600      |              |        |
| Benzo_a_pyrene                 | 0.62087     | 0.61207      |        |
| 0.0003                         | 0.69353     |              |        |
| 30                             | 0.44551     |              |        |
| 42                             | 0.50308     |              |        |
| Benzo_b_fluoranthene           | 0.57383     | 0.74916      |        |
| 0.0053                         | 0.63280     |              |        |
| 35                             | -0.02895    |              |        |
| 53                             | 0.05760     |              |        |
| Benzo_ghi_perylene             | 0.72480     | 0.69251      |        |
| 0.1000                         | 0.41045     |              |        |
| 35                             | -0.0489     |              |        |
| 49                             | 0.57603     |              |        |
| Benzo_k_fluoranthene           | 0.43182     | 0.44329      |        |
| 0.0096                         | 0.69012     |              |        |
| 35                             | 0.08218     |              |        |
| 52                             | 0.44551     |              |        |
| Chrysene                       | 0.43185     | 0.60201      |        |
| 0.0096                         | 0.0006      |              |        |
| 35                             | 0.45035     |              |        |
| 53                             | 0.0007      |              |        |
| Dibenzo_a_h_anthracene         | 0.06077     | 0.20971      |        |
| 0.8437                         | 0.20882     |              |        |
| 13                             | 0.01821     |              |        |
| 14                             | 0.5625      |              |        |
| Dibenzofuran                   | -0.00955    | 0.18727      |        |
| 0.9586                         | 0.36358     |              |        |
| 32                             | 0.17628     |              |        |
| 48                             | 0.2335      |              |        |
| Fluoranthene                   | 0.55391     | 0.76430      |        |
| 0.0006                         | 0.73455     |              |        |
| 35                             | 0.26966     |              |        |
| 53                             | 0.0590      |              |        |
| Fluorene                       | 0.07658     | 0.02690      |        |
| 0.7947                         | 0.01978     |              |        |
| 14                             | 0.27595     |              |        |
| 19                             | 0.02098     |              |        |
| 19                             | 0.30912     |              |        |
| 19                             | 0.17102     |              |        |
| 19                             | 0.17102     |              |        |
### Table 2: Correlation (rank) of PAH and adducts: complete case analysis

The CORR Procedure

| adducts           | _1_Methylnaphthalene | _2_Methylnaphthalene | Acenaphthene | Acenaphthylene | Anthracene |
|-------------------|----------------------|----------------------|--------------|----------------|------------|
| Ieno_1_2_3_cd_pyrene | 0.38926              | 0.46913              | 0.41866      | 0.26680        | 0.30958    |
|                   | 0.1103               | 0.0078               | 0.0123       | 0.2845         | 0.2266     |
|                   | 18                   | 31                   | 35           | 18             | 17         |
|                   |                      |                      |              |                | 32         |
| Naphthalene       | 0.33915              | 0.56500              | 0.37374      | 0.16512        | 0.20697    |
|                   | 0.0576               | <.0001               | 0.0058       | 0.4011         | 0.3209     |
|                   | 32                   | 47                   | 53           | 28             | 25         |
|                   |                      |                      |              |                | 49         |
| Perylene          | 0.16385              | 0.37368              | 0.55513      | 0.30645        | 0.46523    |
|                   | 0.3957               | 0.0136               | <.0001       | 0.1362         | 0.0291     |
|                   | 29                   | 43                   | 49           | 25             | 22         |
|                   |                      |                      |              |                | 45         |
| Phenanthrene      | 0.01597              | 0.26326              | 0.47422      | 0.21194        | 0.32878    |
|                   | 0.9309               | 0.0738               | 0.0003       | 0.2789         | 0.1086     |
|                   | 32                   | 47                   | 53           | 28             | 25         |
|                   |                      |                      |              |                | 49         |
| Pyrene            | 0.17193              | 0.08797              | 0.42260      | -0.00233       | -0.05721   |
|                   | 0.3468               | 0.5566               | 0.0016       | 0.9906         | 0.7859     |
|                   | 32                   | 47                   | 53           | 28             | 25         |
|                   |                      |                      |              |                | 49         |

Spearman Correlation Coefficients

Prob > |r| under H0: Rho=0

Number of Observations
Table 2: Correlation (rank) of PAH and adducts: complete case analysis

The CORR Procedure

|                  | Benzo_a_anthracene | Benzo_a_pyrene | Benzo_b_fluoranthene | Benzo_ghi_perylene |
|------------------|--------------------|----------------|----------------------|--------------------|
| Ieno_1_2_3_cd_pyrene | 0.47840 (0.0037)   | 0.62087 (0.0003) | 0.57383 (0.0003)    | 0.72480 (<.0001)   |
|                  | 35                 | 30             | 35                   | 35                 |
| Naphthalene      | 0.39508 (0.0034)   | 0.44551 (0.0031) | -0.02895 (0.8370)   | 0.41045 (0.0034)   |
|                  | 53                 | 42             | 53                   | 49                 |
| Perylene         | 0.59144 (<.0001)   | 0.69353 (<.0001) | 0.57603 (<.0001)    | 0.74916 (<.0001)   |
|                  | 49                 | 40             | 49                   | 48                 |
| Phenanthrene     | 0.48846 (0.0002)   | 0.50308 (0.0007) | 0.55138 (<.0001)    | 0.63280 (<.0001)   |
|                  | 53                 | 42             | 53                   | 49                 |
| Pyrene           | 0.56389 (<.0001)   | 0.61207 (<.0001) | 0.74884 (<.0001)    | 0.69251 (<.0001)   |
|                  | 53                 | 42             | 53                   | 49                 |
Table 2: Correlation (rank) of PAH and adducts: complete case analysis

The CORR Procedure

|                  | Benzo_k_fluoranthene | Chrysene | Dibenz[a,h]anthracene | Dibenzofuran | Fluoranthene | Fluorene |
|------------------|----------------------|----------|------------------------|--------------|--------------|----------|
| Ieno_1_2_3_cd_pyrene | 0.43182              | 0.43185  | 0.06077                | -0.00955     | 0.55391      | 0.07658  |
|                  | 0.0096               | 0.0096   | 0.8437                 | 0.9586       | 0.0006       | 0.7947   |
|                  | 35                   | 35       | 13                     | 32           | 35           | 14       |
| Naphthalene      | 0.08218              | 0.45035  | 0.20088                | 0.17628      | 0.26966      | 0.27559  |
|                  | 0.5625               | 0.0007   | 0.4911                 | 0.2307       | 0.0509       | 0.2535   |
|                  | 52                   | 53       | 14                     | 48           | 53           | 19       |
| Perylene         | 0.69012              | 0.60201  | 0.20971                | 0.18727      | 0.76430      | 0.02609  |
|                  | <.0001               | <.0001   | 0.4718                 | 0.2235       | <.0001       | 0.9208   |
|                  | 49                   | 49       | 14                     | 44           | 49           | 17       |
| Phenanthrene     | 0.44329              | 0.47696  | 0.02428                | 0.36358      | 0.73455      | 0.30912  |
|                  | 0.0010               | 0.0003   | 0.9343                 | 0.0111       | <.0001       | 0.1978   |
|                  | 52                   | 53       | 14                     | 48           | 53           | 19       |
| Pyrene           | 0.68057              | 0.56698  | 0.23179                | 0.19856      | 0.93139      | 0.17102  |
|                  | <.0001               | <.0001   | 0.4252                 | 0.1761       | <.0001       | 0.4839   |
|                  | 52                   | 53       | 14                     | 48           | 53           | 19       |
Table 2: Correlation (rank) of PAH and adducts: complete case analysis

The CORR Procedure

|                   | Ieno_1_2_3_cd_pyrene | Naphthalene | Perylene | Phenanthrene | Pyrene |
|-------------------|-----------------------|-------------|----------|--------------|--------|
| Ieno_1_2_3_cd_pyrene | 1.00000              | 0.16584     | 0.59175  | 0.42649      | 0.59192|
|                   | 35                    | 35          | 35       | 35           | 35     |
| Naphthalene      | 0.16584               | 1.00000     | 0.44992  | 0.37948      | 0.17542|
|                   | 35                    | 53          | 49       | 53           | 53     |
| Perylene         | 0.59175               | 0.44992     | 1.00000  | 0.74615      | 0.75818|
|                   | 0.0002                | 0.0012      | <.0001   | <.0001       |        |
|                   | 35                    | 49          | 49       | 49           | 49     |
| Phenanthrene     | 0.42649               | 0.37948     | 0.74615  | 1.00000      | 0.73195|
|                   | 0.0106                | 0.0051      | <.0001   | <.0001       |        |
|                   | 35                    | 53          | 49       | 53           | 53     |
| Pyrene           | 0.59192               | 0.17542     | 0.75818  | 0.73195      | 1.00000|
|                   | 0.0002                | 0.2090      | <.0001   | <.0001       |        |
|                   | 35                    | 53          | 49       | 53           | 53     |
### The CORR Procedure

#### 3 Variables: Dibenzofuran Naphthalene Pyrene

#### Simple Statistics

| Variable | N  | Mean   | Std Dev | Sum     | Minimum | Maximum |
|----------|----|--------|---------|---------|---------|---------|
| Dibenzofuran | 48 | 5.97604 | 6.99461 | 286.85000 | 2.37000 | 41.80000 |
| Naphthalene  | 53 | 13.13594 | 16.30821 | 696.20500 | 3.89000 | 97.70000 |
| Pyrene     | 53 | 28.51509 | 10.06842 | 1511 | 10.75000 | 68.40000 |

#### Pearson Correlation Coefficients

|             | Dibenzofuran | Naphthalene | Pyrene |
|-------------|--------------|-------------|--------|
| Dibenzofuran| 1.00000      | 0.96700     | -0.11355 |
|             | 48           | <.0001      | 0.4422 |
|             |              | 48          | 48     |
| Naphthalene | 0.96700      | 1.00000     | -0.03022 |
|             | <.0001       | 53          | 0.8299 |
|             | 48           | 53          | 53     |
| Pyrene      | -0.11355     | -0.03022    | 1.00000 |
|             | 0.4422       | 0.8299      | 53     |
|             | 48           | 53          | 53     |
The PRINCOMP Procedure

Observations 14
Variables 20

Eigenvalues of the Correlation Matrix

| Eigenvalue | Difference | Proportion | Cumulative |
|------------|------------|------------|------------|
| 1 7.45922296 | 0.64416189 | 0.3730     | 0.3730     |
| 2 6.81506108 | 4.77122931 | 0.3408     | 0.7137     |
| 3 2.04383177 | 0.1022     | 0.1022     | 0.8159     |

Eigenvectors

|                   | Prin1   | Prin2   | Prin3   |
|-------------------|---------|---------|---------|
| _1_Methylnaphthalene | 0.143863 | 0.307939 | 0.093017 |
| _2_Methylnaphthalene | 0.180958 | 0.275066 | -0.039925 |
| Acenaphthene       | 0.183437 | 0.306444 | 0.158278 |
| Acenaphthylene     | 0.169749 | 0.319706 | 0.175056 |
| Anthracene         | 0.306689 | 0.185081 | 0.09225  |
| Benzo_a_anthracene | 0.134408 | -0.126970 | 0.334155 |
| Benzo_a_pyrene     | 0.289231 | -0.100647 | 0.048163 |
| Benzo_b_fluoranthene | 0.192861 | -0.167920 | -0.111496 |
| Benzo_ghi_perylene | 0.309345 | -0.096731 | -0.091960 |
| Benzo_k_fluoranthene | 0.214107 | -0.206196 | -0.003249 |
| Chrysene           | 0.185576 | -0.198854 | 0.216759 |
| Dibenzo_a_h_anthracene | 0.109765 | -0.041866 | 0.717099 |
| Dibenzofuran       | 0.122313 | 0.335437 | 0.003028 |
| Fluoranthene       | 0.281742 | -0.200033 | -0.102066 |
| Fluorene           | 0.066937 | 0.378875 | -0.351013 |
| Ieno_1_2_3_cd_pyrene | 0.295171 | -0.081074 | -0.103359 |
| Naphthalene        | 0.159224 | 0.312871 | 0.067371 |
| Perylene           | 0.330341 | -0.085464 | -0.023130 |
| Phenanthrene       | 0.268400 | -0.082612 | -0.250236 |
| Pyrene             | 0.265774 | -0.196370 | -0.160832 |
Principal components analysis of PAH in moss: complete case analysis of correlation matrix

The PRINCOMP Procedure

Scree Plot

Variance Explained

Eigenvalue

Principal Component

Proportion

Principal Component

Cumulative

Proportion