# Additions and Corrections

2007, Volume 41, Pages 1962–1969

Sarah G. Riddle, Michael A. Robert, Chris A. Jakober, Michael P. Hannigan and Michael J. Kleeman*: Size Distribution of Trace Organic Species Emitted From Heavy-Duty Diesel Vehicles

Ratios of analyte mass to total organic carbon (OC) mass ($\mu$g/g) for the PM1.8 and the PM0.1 size fractions are shown in Tables 1 and 2, respectively. Ratios of analyte mass to total elemental carbon (EC) mass ($\mu$g/g) for the PM1.8 and PM0.1 size fractions are shown in Tables 3 and 4, respectively. The PM0.1 values published in the original manuscript did not incorporate the pyrolysis correction in the OC and EC values used to normalize the mass of each analyte. The PM1.8 values published in the original manuscript did not incorporate correction for adsorption artifacts measured with a downstream filter. The authors apologize for these errors.

The revised values shown in Tables 1–4 confirm all of the conclusions made in the original manuscript with a single exception. The abundance of PAHs relative to OC in the ultrafine size fraction and the PM1.8 size fraction are approximately equal. There is not an enhancement of the relative PAH concentration in the ultrafine size fraction as was stated in the original manuscript.

**TABLE 1. Ratio of Analyte Mass ($\mu$g) to Organic Carbon Mass (g) for the RAAS Filter Measurements for Organic Compounds Emitted from HDDVs in the PM1.8 Size Fraction[a]**

| | 1999 Freightliner idle/Creep | | 1999 Freightliner 56k | | 1998 Kenworth 56K | | 1998 Kenworth 66K | | 1992 Volvo 56K | | 1985 Freightliner 56K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| compound | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error |
| hopanes | | | | | | | | | | | | |
| 17α(H)-21β(H)-29-norhpane | 348.4 | 34.4 | 171.5 | 17.0 | 285.0 | 32.7 | 163.1 | 19.7 | 144.9 | 18.5 | 177.0 | 16.0 |
| 17α(H)-21β(H)-hopane | 186.2 | 18.4 | 122.3 | 12.2 | 278.5 | 31.9 | 196.6 | 24.7 | 234.3 | 29.7 | 197.7 | 18.2 |
| steranes | | | | | | | | | | | | |
| αββ−20R-stigmastane | 101.7 | 10.1 | 78.5 | 7.8 | 133.3 | 15.3 | 81.7 | 11.3 | 65.2 | 8.3 | 171.8 | 15.7 |
| αββ−20S-stigmastane [b] | 83.3 | 8.2 | 61.5 | 6.1 | 112.9 | 13.0 | 25.3 | 6.7 | 101.1 | 12.8 | 118.4 | 11.1 |
| PAHs | | | | | | | | | | | | |
| phenanthrene | 9.2 | 2.9 | 96.6 | 12.5 | 125.1 | 18.0 | 31.4 | 9.3 | 73.8 | 12.4 | 422.7 | 47.8 |
| anthracene | ND | | ND | | ND | | ND | | ND | | 24.5 | 6.0 |
| A-methylphenanthrene | 9.7 | 14.9 | 60.0 | 25.7 | 70.5 | 29.1 | 165.8 | 62.5 | 40.6 | 34.7 | 375.6 | 50.8 |
| B-methylphenanthrene | 12.1 | 14.9 | 141.0 | 29.7 | 142.8 | 33.5 | 205.4 | 64.5 | 103.2 | 37.1 | 493.8 | 61.9 |
| C-methylphenanthrene | ND | | 51.6 | 25.5 | 68.2 | 29.0 | 114.5 | 60.6 | 66.9 | 35.4 | 275.5 | 42.4 |
| D-methylphenanthrene | ND | | 41.8 | 25.2 | 57.5 | 28.6 | 82.8 | 59.8 | 56.3 | 35.1 | 201.9 | 37.2 |
| fluoranthene | 22.3 | 3.7 | 115.6 | 14.5 | 91.5 | 13.4 | 71.6 | 13.1 | 305.9 | 44.3 | 458.9 | 51.8 |
| pyrene | 48.1 | 7.2 | 250.8 | 30.8 | 282.1 | 39.5 | 156.9 | 24.3 | 684.8 | 98.6 | 781.5 | 88.0 |
| benzo[ghi]fluoranthene | 13.1 | 2.7 | 15.5 | 4.1 | 56.2 | 8.8 | 41.8 | 7.3 | 79.5 | 12.6 | 106.0 | 12.3 |
| chrysene | 5.0 | 2.9 | ND | | 24.2 | 6.3 | 30.9 | 12.1 | 20.5 | 7.2 | 37.3 | 7.3 |
| benzo[b]fluoranthene | 11.9 | 8.0 | ND | | 25.1 | 15.0 | 51.9 | 56.1 | 23.5 | 18.5 | 62.3 | 29.6 |
| benzo[k]fluoranthene | 4.3 | 1.7 | ND | | 4.4 | 3.1 | 4.3 | 28.0 | ND | | 6.0 | 14.6 |
| benzo[e]pyrene | 10.4 | 3.4 | ND | | 18.4 | 6.5 | 15.4 | 8.6 | 31.6 | 8.7 | 41.8 | 6.5 |
| benzo[a]pyrene | 8.4 | 4.0 | ND | | 18.7 | 7.6 | 2.1 | 9.5 | ND | | 13.4 | 5.2 |
| indeno[1,2,3-cd]pyrene | 8.5 | 7.4 | ND | | ND | | ND | | ND | | ND | |
| benzo[ghi]perylene | 36.7 | 5.8 | ND | | 20.7 | 8.3 | 12.6 | 23.6 | ND | | ND | |
| coronene | 16.2 | 3.0 | ND | | ND | | ND | | ND | | ND | |

[a] Uncertainty values represent analytical uncertainty. ND = not detected. [b] Analyte identification based on comparisons of relative retention times to those in the literature.


10.1021/es7022169 CCC: $40.75

Published on Web 12/19/2007

**TABLE 2. Ratio of Analyte Mass ($\mu$g) to Organic Carbon Mass (g) for the MOUDI Measurements for Organic Compounds Emitted from HDDVs in the PM0.1 Size Fraction[a]**

| | 1999 Freightliner idle/creep | | 1999 Freightliner 56k | | 1998 Kenworth 56K | | 1998 Kenworth 66K | | 1992 Volvo 56K | | 1985 Freightliner 56K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| compound | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error |
| hopanes | | | | | | | | | | | | |
| 17α(H)-21β(H)-29-norhopane | 149.6 | 9.0 | 138.9 | 9.0 | 104.6 | 6.7 | 560.4 | 48.7 | 189.6 | 14.1 | 93.1 | 6.6 |
| 17α(H)-21β(H)-hopane | 127.0 | 7.7 | 125.2 | 8.2 | 111.1 | 7.1 | 649.8 | 57.2 | 184.6 | 13.8 | 124.9 | 9.5 |
| steranes | | | | | | | | | | | | |
| αββ−20R-stigmastane | 42.0 | 2.5 | 66.6 | 4.3 | 41.5 | 2.7 | 195.0 | 18.6 | 0.0 | | 0.0 | |
| αββ−20S-stigmastane[b] | 37.9 | 2.3 | 47.8 | 3.1 | 29.5 | 2.0 | 155.3 | 15.6 | 0.0 | | 0.0 | |
| PAHs | | | | | | | | | | | | |
| phenanthrene | 19.9 | 2.8 | 105.2 | 10.7 | 27.8 | 5.0 | 61.5 | 12.6 | 125.4 | 13.9 | 235.6 | 22.4 |
| anthracene | ND | | ND | | ND | | ND | | ND | | 79.2 | 9.8 |
| A-methylphenanthrene | ND | | 110.1 | 24.4 | 20.4 | 23.2 | ND | | 90.6 | 31.5 | 288.7 | 42.6 |
| B-methylphenanthrene | ND | | 155.2 | 26.4 | 29.5 | 23.2 | ND | | 191.0 | 35.4 | 364.9 | 46.9 |
| C-methylphenanthrene | ND | | 65.9 | 23.1 | 11.7 | 23.1 | ND | | 115.0 | 32.2 | 205.7 | 38.8 |
| D-methylphenanthrene | ND | | 60.2 | 23.0 | 9.3 | 23.1 | ND | | 90.5 | 31.5 | 148.4 | 36.8 |
| fluoranthene | 6.2 | 1.9 | 163.5 | 15.7 | 29.4 | 4.6 | 62.5 | 12.8 | 379.2 | 38.4 | 355.4 | 33.2 |
| pyrene | 10.1 | 3.0 | 361.1 | 34.2 | 74.5 | 9.1 | 200.8 | 26.1 | 950.8 | 95.5 | 559.2 | 52.0 |
| benzo[ghi]fluoranthene | 2.8 | 1.7 | 16.2 | 3.6 | 34.4 | 4.7 | 49.4 | 7.8 | 80.5 | 9.3 | 94.9 | 9.3 |
| chrysene | 2.3 | 2.2 | ND | | 18.3 | 4.8 | 27.3 | 14.8 | 19.4 | 6.1 | 33.0 | 7.4 |
| benzo[b]fluoranthene | 5.5 | 6.1 | ND | | 17.7 | 12.4 | 36.9 | 72.0 | ND | | 51.9 | 33.2 |
| benzo[k]fluoranthene | 1.7 | 1.3 | ND | | ND | | ND | | ND | | ND | |
| benzo[e]pyrene | 5.6 | 2.5 | ND | | 6.4 | 5.0 | 26.6 | 11.2 | ND | | ND | |
| benzo[a]pyrene | 4.3 | 3.0 | ND | | 5.8 | 5.9 | ND | | ND | | ND | |
| indeno[1,2,3-cd]pyrene | 2.4 | 5.7 | ND | | ND | | ND | | ND | | ND | |
| benzo[ghi]perylene | 12.4 | 3.4 | ND | | ND | | ND | | ND | | ND | |
| coronene | ND | | ND | | ND | | ND | | ND | | ND | |

[a] Uncertainty values represent analytical uncertainty. ND = not detected. [b] Analyte identification based on comparisons of relative retention times to those in the literature.

**TABLE 3. Ratio of Analyte Mass ($\mu$g) to Elemental Carbon Mass (g) for the RAAS Filter Measurements from HDDVs in the PM1.8 Size Fraction[a]**

| | 1999 Freightliner idle/creep | | 1999 Freightliner 56k | | 1998 Kenworth 56K | | 1998 Kenworth 66K | | 1992 Volvo 56K | | 1985 Freightliner 56K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| compound | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error |
| hopanes | | | | | | | | | | | | |
| 17α(H)-21β(H)-29-norhpane | 723.9 | 72.2 | 104.2 | 8.5 | 218.6 | 19.6 | 114.8 | 10.9 | 28.4 | 2.1 | 45.8 | 3.2 |
| 17α(H)-21β(H)-hopane | 386.8 | 38.6 | 74.3 | 6.1 | 213.5 | 19.2 | 138.4 | 14.0 | 45.9 | 3.4 | 51.2 | 3.7 |
| steranes | | | | | | | | | | | | |
| αββ−20R-stigmastane | 211.3 | 21.1 | 47.7 | 3.9 | 102.2 | 9.2 | 57.5 | 6.7 | 12.8 | 1.0 | 44.5 | 3.2 |
| αββ−20S-stigmastane[b] | 173.0 | 17.3 | 37.4 | 3.1 | 86.6 | 7.8 | 17.8 | 4.5 | 19.8 | 1.4 | 30.7 | 2.3 |
| PAHs | | | | | | | | | | | | |
| phenanthrene | 19.2 | 6.1 | 58.7 | 6.9 | 95.9 | 12.0 | 22.1 | 6.3 | 14.5 | 1.9 | 109.5 | 10.7 |
| anthracene | ND | | ND | | ND | | ND | | ND | | 6.3 | 1.5 |
| A-methylphenanthrene | 20.2 | 30.9 | 36.5 | 15.5 | 54.0 | 22.0 | 116.8 | 43.1 | 8.0 | 6.7 | 97.3 | 12.0 |
| B-methylphenanthrene | 25.1 | 30.9 | 85.7 | 17.4 | 109.5 | 24.5 | 144.6 | 44.1 | 20.2 | 7.0 | 127.9 | 14.3 |
| C-methylphenanthrene | ND | | 31.4 | 15.4 | 52.3 | 21.9 | 80.6 | 42.2 | 13.1 | 6.8 | 71.3 | 10.2 |
| D-methylphenanthrene | ND | | 25.4 | 15.3 | 44.1 | 21.7 | 58.3 | 41.8 | 11.0 | 6.8 | 52.3 | 9.2 |
| fluoranthene | 46.3 | 7.7 | 70.2 | 7.9 | 70.2 | 9.0 | 50.4 | 8.4 | 59.9 | 6.1 | 118.8 | 11.6 |
| pyrene | 99.9 | 14.9 | 152.3 | 16.6 | 216.3 | 26.0 | 110.5 | 15.0 | 134.2 | 13.4 | 202.4 | 19.7 |
| benzo[ghi]fluoranthene | 27.1 | 5.7 | 9.4 | 2.4 | 43.1 | 6.0 | 29.4 | 4.7 | 15.6 | 1.9 | 27.5 | 2.8 |
| chrysene | 10.4 | 6.0 | ND | | 18.6 | 4.6 | 21.8 | 8.3 | 4.0 | 1.3 | 9.7 | 1.8 |
| benzo[b]fluoranthene | 24.7 | 16.6 | ND | | 19.2 | 11.5 | 36.6 | 39.4 | 4.6 | 3.6 | 16.1 | 7.6 |
| benzo[k]fluoranthene | 9.0 | 3.6 | ND | | 3.3 | 2.4 | 3.0 | 19.7 | ND | | 1.6 | 3.8 |
| benzo[e]pyrene | 21.5 | 7.2 | ND | | 14.1 | 4.9 | 10.9 | 6.0 | 6.2 | 1.6 | 10.8 | 1.6 |
| benzo[a]pyrene | 17.5 | 8.2 | ND | | 14.3 | 5.7 | 1.5 | 6.7 | ND | | 3.5 | 1.3 |
| indeno[1,2,3-cd]pyrene | 17.7 | 15.3 | ND | | ND | | ND | | ND | | ND | |
| benzo[ghi]perylene | 76.2 | 12.1 | ND | | 15.9 | 6.2 | 8.9 | 16.6 | ND | | ND | |
| coronene | 33.7 | 6.2 | ND | | ND | | ND | | ND | | ND | |

[a] Uncertainty values represent analytical uncertainty. ND = not detected. [b] Analyte identification based on comparisons of relative retention times to those in the literature.

**TABLE 4. Ratio of Analyte Mass ($\mu$g) to Elemental Carbon Mass (g) for the MOUDI Measurements from HDDVs in the PM0.1 Size Fraction[a]**

| | 1999 Freightliner idle/creep | | 1999 Freightliner 56k | | 1998 Kenworth 56K | | 1998 Kenworth 66K | | 1992 Volvo 56K | | 1985 Freightliner 56K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| compound | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error | ratio | error |
| hopanes | | | | | | | | | | | | |
| 17α(H)-21β(H)-29-norhpane | 443.4 | 36.0 | 134.6 | 11.3 | 141.2 | 14.6 | 398.1 | 35.9 | 37.3 | 2.3 | 26.4 | 1.8 |
| 17α(H)-21β(H)-hopane | 376.4 | 30.6 | 121.3 | 10.2 | 150.0 | 15.5 | 461.6 | 42.1 | 36.3 | 2.2 | 35.5 | 2.6 |
| steranes | | | | | | | | | | | | |
| αββ−20R-stigmastane | 124.4 | 10.1 | 64.5 | 5.4 | 56.0 | 5.8 | 138.5 | 13.6 | ND | | ND | |
| αββ−20S-stigmastane[b] | 112.4 | 9.2 | 46.3 | 3.9 | 39.9 | 4.2 | 110.3 | 11.4 | ND | | ND | |
| PAHs | | | | | | | | | | | | |
| phenanthrene | 59.0 | 8.9 | 102.0 | 11.8 | 37.5 | 7.4 | 43.7 | 9.0 | 24.7 | 2.5 | 66.9 | 6.3 |
| anthracene | ND | | ND | | ND | | ND | | ND | | 22.5 | 2.7 |
| A-methylphenanthrene | ND | | 106.7 | 24.4 | 27.6 | 31.3 | ND | | 17.8 | 6.1 | 82.0 | 12.0 |
| B-methylphenanthrene | ND | | 150.4 | 26.8 | 39.8 | 31.5 | ND | | 37.6 | 6.8 | 103.6 | 13.2 |
| C-methylphenanthrene | ND | | 63.9 | 22.7 | 15.8 | 31.2 | ND | | 22.7 | 6.3 | 58.4 | 11.0 |
| D-methylphenanthrene | ND | | 58.3 | 22.5 | 12.6 | 31.2 | ND | | 17.8 | 6.1 | 42.2 | 10.4 |
| fluoranthene | 18.5 | 5.7 | 158.4 | 17.4 | 39.7 | 7.0 | 44.4 | 9.2 | 74.7 | 6.9 | 100.9 | 9.3 |
| pyrene | 29.9 | 9.2 | 349.9 | 38.0 | 100.6 | 14.8 | 142.6 | 18.8 | 187.2 | 17.1 | 158.8 | 14.5 |
| benzo[ghi]fluoranthene | 8.2 | 4.9 | 15.7 | 3.6 | 46.4 | 7.4 | 35.1 | 5.6 | 15.8 | 1.7 | 27.0 | 2.6 |
| chrysene | 6.8 | 6.5 | ND | | 24.7 | 6.7 | 19.4 | 10.5 | 3.8 | 1.2 | 9.4 | 2.1 |
| benzo[b]fluoranthene | 16.4 | 18.1 | ND | | 24.0 | 16.8 | 26.2 | 51.2 | ND | | 14.7 | 9.4 |
| benzo[k]fluoranthene | 5.1 | 3.8 | ND | | ND | | ND | | ND | | ND | |
| benzo[e]pyrene | 16.6 | 7.5 | ND | | 8.7 | 6.8 | 18.9 | 8.0 | ND | | ND | |
| benzo[a]pyrene | 12.9 | 8.8 | ND | | 7.8 | 8.1 | ND | | ND | | ND | |
| indeno[1,2,3-cd]pyrene | 7.2 | 16.8 | ND | | ND | | ND | | ND | | ND | |
| benzo[ghi]perylene | 36.9 | 10.3 | ND | | ND | | ND | | ND | | ND | |
| coronene | ND | | ND | | ND | | ND | | ND | | ND | |

[a] Uncertainty values represent analytical uncertainty. ND = not detected. [b] Analyte identification based on comparisons of relative retention times to those in the literature.

ES7022169
10.1021/es7022169
Published on Web 12/19/2007

2007, Volume 41, Pages 2387–2394

E. Matthew Fiss, Krista L. Rule, and Peter J. Vikesland*: Formation of Chloroform and other Chlorinated Byproducts by Chlorination of Triclosan-Containing Products

The value for a parameter in the Potential Health Significance section was reported incorrectly. The triclosan mass concentration (TC) used in the model was 3.3 mg triclosan/g soap, which represents the upper end of the range of triclosan concentrations measured in the tested soaps. If the reported value of 2.0 mg triclosan/g soap were applied, the resulting inhalational exposure would range from 3.5 to 14.5 mg/yr.

ES702530R
10.1021/es702530r
Published on Web 12/20/2007