

**Supplementary Information**

**Dissolved Black Carbon and Semivolatile Aromatic Hydrocarbons in the Ocean: Two Entangled Biogeochemical Cycles?**

**Núria Trilla-Prieto<sup>1</sup>, Maria Vila-Costa<sup>1</sup>, Gemma Casas<sup>1</sup>, Begoña Jiménez<sup>2</sup>, Jordi Dachs<sup>1\*</sup>.**

1 Department of Environmental Chemistry, IDAEA-CSIC, Barcelona, Catalunya, Spain.

2 Department of Instrumental Analysis and Environmental Chemistry, IQOG-CSIC, Madrid, Spain

\* Corresponding author email: [jordi.dachs@idaea.csic.es](mailto:jordi.dachs@idaea.csic.es)

This supplementary material contains Table S1 and Figure S1

Table S1: Summary of the DBC and SALC concentrations for the eight oceanic regions where SALCs and DBC were compared. The concentrations are the mean for the region. SD stands for standard deviation. N is the number of measurements in that given region.

|                                  |          | <b>N</b> | <b>[DBC] ngL-1</b> | <b>SD</b> | <b>N</b> | <b>[SALC] ng L-1</b> | <b>SD</b> | <b>[SALCS]/[DBC](%)</b> |
|----------------------------------|----------|----------|--------------------|-----------|----------|----------------------|-----------|-------------------------|
| <b>Bering Strait-Arctic</b>      | <b>A</b> | 18       | 5456               | 3731      | 30       | 1322                 | 1704      | 24.2                    |
| <b>Subtropical North Pacific</b> | <b>B</b> | 2        | 4285               | 4523      | 2        | 1322                 | 665       | 30.9                    |
| <b>Tropical North Atlantic</b>   | <b>C</b> | 8        | 14394              | 10508     | 2        | 1438                 | 217       | 10.0                    |
| <b>Eastern South Atlantic</b>    | <b>D</b> | 1        | 3983               | 0         | 8        | 210                  | 129       | 5.3                     |
| <b>Southern Ocean</b>            | <b>E</b> | 7        | 8777               | 1743      | 26       | 1379                 | 1229      | 15.7                    |
| <b>South China Sea</b>           | <b>F</b> | 41       | 12518              | 3008      | 12       | 1883                 | 963       | 15.0                    |
| <b>Nortwest Pacific</b>          | <b>G</b> | 44       | 49268              | 27902     | 22       | 2247                 | 3251      | 4.6                     |
| <b>Pacific Subarctic</b>         | <b>H</b> | 10       | 7368               | 1001      | 12       | 1653                 | 1653      | 22.4                    |
| <b>MEAN</b>                      |          |          | <b>13256</b>       |           |          | <b>1432</b>          |           | <b>16.0</b>             |

Figure S1: Global distribution of concentrations of DBC (upper panel) and SALCs (lower panel) in the oceans for the eight regions where DBC and SALCs could be compared.

