**Supplementary Material 1.** Sterol composition of settling material (μg/g in a dry weight basis) at Buenos Aires and North during warm (September to March) and cold periods (April to August). Proportions are indicated between parentheses.

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **BA** |  |  |  | **N** |  |
|  | **Warm** | **Cold** | **Total** |  | **Warm** | **Cold** | **Total** |
| Coprostanol | 5577 ± 1241  (58 ± 9.1) | 1314 ± 1241  (44 ± 8.3) | 3623 ± 4765  (52 ± 11) |  | 0.42 ± 0.50  (1.2 ± 0.83) | 0.29 ± 0.20  (1.5 ± 1.6) | 0.36 ± 0.39  (1.3 ± 1.3) |
| Epicoprostanol | 165 ± 1138  (3.3 ± 3.0) | 642 ± 1138  (17 ± 9.7) | 384 ± 794  (9.3 ± 9.6) |  | 0.50 ± 0.64  (1.1 ± 1.0) | 0.33 ± 0.29  (1.3 ± 1.2) | 0.42 ± 0.50  (1.2 ± 1.1) |
| Ethylcoprostanol | 741 ± 123  (9.0 ± 3.1) | 178 ± 123  (7.9 ± 5.7) | 483 ± 555  (8.5 ± 4.4) |  | 0.75 ± 0.64  (3.2 ± 3.6) | 0.68 ± 0.45  (4.6 ± 5.8) | 0.72 ± 0.55  (3.9 ± 4.7) |
| Coprostanone | 380 ± 207  (5.0 ± 2.6) | 163 ± 207  (5.7 ± 4.1) | 280 ± 301  (5.4 ± 3.3) |  | 0.73 ± 1.8  (1.3 ± 2.8) | 0.19 ± 0.30  (0.88 ± 1.3) | 0.47 ± 1.3  (1.1 ± 2.2) |
| Coprostane | 0.94 ± 2.60  (0.017 ± 0.063) | 2.3 ± 6.0  (0.076 ± 0.17) | 1.6 ± 4.7  (0.044 ± 0.12) |  | n.d. | n.d. | n.d. |
| Sitosterol | 312 ± 177  (4.3 ± 2.3) | 165 ± 177  (4.8 ± 1.2) | 243 ± 220  (4.5 ± 1.9) |  | 9.0 ± 12  (19 ± 5.3) | 7.8 ± 7.5  (21 ± 5.6) | 8.4 ± 10  (20 ± 5.4) |
| Stigmasterol | 39 ± 36  (0.77 ± 0.74) | 35 ± 36  (1.4 ± 0.62) | 37 ± 35  (1.0 ± 0.74) |  | 4.4 ± 4.1  (15 ± 6.7) | 4.3 ± 3.7  (15 ± 9.2) | 4.3 ± 3.9  (15 ± 7.9) |
| Stigmastanol | 80 ± 143  (1.4 ± 0.89) | 79 ± 143  (2.0 ± 0.78) | 79 ± 104  (1.6 ± 0.88) |  | 3.8 ± 6.1  (8.3 ± 4.9) | 3.3 ± 3.5  (9.2 ± 4.0) | 3.6 ± 4.9  (8.7 ± 4.4) |
| Campesterol | 28 ± 27  (0.82 ± 1.0) | 33 ± 27  (1.5 ± 0.63) | 30 ± 30  (1.1 ± 0.92) |  | 4.2 ± 4.5  (12 ± 4.4) | 4.0 ± 3.9  (14 ± 15) | 4.1 ± 4.2  (13 ± 11) |
| Dihydrobrassicasterol | 0.45 ± 0.39  (0.0055 ± 0.0089) | 0.22 ± 0.39  (0.0085 ± 0.020) | 0.34 ± 0.48  (0.0069 ± 0.015) |  | 0.17 ± 0.68  (0.49 ± 1.8) | 0.26 ± 0.71  (0.80 ± 1.8) | 0.22 ± 0.68  (0.64 ± 1.8) |
| Brassicasterol | 0.14 ± 0.29  (0.0029 ± 0.0066) | 0.11 ± 0.29  (0.0061 ± 0.018) | 0.13 ± 0.27  (0.0044 ± 0.013) |  | 0.041 ± 0.13  (0.13 ± 0.36) | 0.12 ± 0.31  (0.45 ± 1.0) | 0.078 ± 0.23  (0.29 ± 0.72) |
| Desmosterol | 0.76 ± 1.0  (0.0035 ± 0.0088) | 0.29 ± 1.0  (0.0076 ± 0.025) | 0.54 ± 1.7  (0.0054 ± 0.018) |  | 0.024 ± 0.049  (0.37 ± 1.0) | 0.12 ± 0.17  (1.1 ± 1.9) | 0.069 ± 0.13  (0.71 ± 1.5) |
| Cholesterol | 1154 ± 355  (13 ± 2.9) | 348 ± 355  (11 ± 2.5) | 785 ± 933  (12 ± 2.9) |  | 17 ± 28  (28 ± 12) | 10 ± 11  (23 ± 11) | 14 ± 22  (26 ± 12) |
| Cholestanol | 235 ± 34  (1.7 ± 1.2) | 54 ± 34  (1.6 ± 1.2) | 149 ± 207  (1.7 ± 1.2) |  | 0.39 ± 0.71  (1.5 ± 1.7) | 0.28 ± 0.25  (1.6 ± 2.7) | 0.34 ± 0.54  (1.6 ± 2.2) |
| Dehydrocholesterol | 231 ± 206  (2.9 ± 1.1) | 108 ± 206  (2.9 ± 1.4) | 174 ± 217  (2.9 ± 1.2) |  | 3.4 ± 6.2  (8.6 ± 9.6) | 1.4 ± 1.7  (4.6 ± 3.7) | 2.4 ± 4.7  (6.6 ± 7.5) |
| Ergosterol | n.d. | n.d. | n.d. |  | 0.27 ± 1.1  (0.50 ± 1.9) | 0.31 ± 0.84  (1.3 ± 4.5) | 0.29 ± 1.0  (0.90 ± 3.4) |

**Supplementary Material 2.** Sterol composition of sediments (μg/g in a dry weight basis) at Buenos Aires and North. Proportions are indicated between parentheses.

|  |  |  |
| --- | --- | --- |
|  | **BA** | **N** |
| Coprostanol | 349 ± 282  (47 ± 11) | 0.017 ± 0.0041  (0.84 ± 0.22) |
| Epicoprostanol | 100 ± 63  (15 ± 2.6) | 0.053 ± 0.024  (2.7 ± 1.2) |
| Ethylcoprostanol | 53 ± 33  (8.3 ± 2.8) | 0.027 ± 0.0088  (1.4 ± 0.48) |
| Coprostanone | 40 ± 30  (6.3 ± 1.8) | 0.047 ± 0.0079  (2.4 ± 0.42) |
| Coprostane | 1.5 ± 4.8  (0.34 ± 1.1) | n.d. |
| Sitosterol | 30 ± 16  (5.1 ± 1.8) | 0.50 ± 0.082  (25 ± 3.0) |
| Stigmasterol | 3.2 ± 1.9  (0.57 ± 0.23) | 0.24 ± 0.086  (12 ± 4.6) |
| Stigmastanol | 14 ± 9.6  (2.1 ± 1.2) | 0.24 ± 0.046  (12 ± 1.9) |
| Campesterol | 3.7 ± 3.2  (0.59 ± 0.34) | 0.27 ± 0.084  (13 ± 3.7) |
| Dihydrobrassicasterol | 0.074 ± 0.061  (0.017 ± 0.016) | n.d. |
| Brassicasterol | 0.0085 ± 0.013  (0.0010 ± 0.0014) | 0.0065 ± 0.0019  (0.33 ± 0.12) |
| Desmosterol | 0.21 ± 0.67  (0.038 ± 0.12) | 0.0039 ± 0.0010  (0.20 ± 0.058) |
| Cholesterol | 55 ± 39  (9.1 ± 3.4) | 0.43 ± 0.078  (22 ± 2.9) |
| Cholestanol | 16 ± 9.1  (2.7 ± 1.0) | 0.033 ± 0.0075  (1.7 ± 0.48) |
| Dehydrocholesterol | 14 ± 11  (2.8 ± 2.1) | 0.095 ± 0.049  (4.7 ± 2.0) |
| Ergosterol | 0.20 ± 0.51  (0.017 ± 0.039) | n.d. |