**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. |
| β-Sitosterol | 294±177  (4.2±2.3) | 147±177  (4.6±1.2) | 226±220  (4.4±1.9) |  | 9.0±12  (19±5.3) | 7.4±7.5  (20±5.6) | 8.2±10  (19±5.4) |
| γ-Sitosterol | 16±54  (0.11±0.14) | 18±54  (0.16±0.43) | 17±41  (0.13±0.30) |  | 0.0030±0.0122  (0.030±0.12) | 0.43±0.71  (1.2±2.3) | 0.21±0.53  (0.62±1.7) |
| 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. |
| β-Sitosterol | 30±16  (5.1±1.8) | 0.50±0.082  (25±3.0) |
| γ-Sitosterol | 0.14±0.45  (0.011±0.034) | 0.010±0.0037  (0.51±0.16) |
| 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. |