**附表1 ROV06、HM101站位沉积物古菌生物标志化合物含量（ng/g）和碳同位素比值δ13C（‰）**

**Table1 The contents (ng/g) and δ13C values (‰) of archaea biomarkers from the sediments of site ROV06 and site HM101**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cr/ Ph | | PMI | | Archaeol | | *sn*2-OH-Ar | | phytanol | | phytanoic acid | | *sn*2-OH-Ar/Ar |
| 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) |
| ROV06 站位 | | | | | | | | | | | | | |
| 0-2 cm | 215 | 72 | 70 | 79 | 137 | 113 | 69 | 101 | 26 | 83 | 112 | 72 | 0.5 |
| 6-8 cm | 599 | 76 | 259 | 82 | 11 | 105 | 6 | 93 | 18 | 87 | 332 | 71 | 0.5 |
| 12-14 cm | 456 | 102 | 30 | 93 | 336 | 114 | 667 | 100 | 43 | 101 | 31 | 80 | 2 |
| 18-20 cm | 1645 | 99 | 90 | 96 | 145 | 108 | 284 | 102 | 39 | 121 | 34 | n.d. | 2 |
| 24-26 cm | 864 | 95 | 66 | 96 | 121 | 111 | 353 | 104 | 30 | 89 | 71 | 79 | 2.9 |
|  | | | | | | | | | | | | | |
| HM101 站位 | | | | | | | | | | | | | |
| 0-2 cm | 2596 | 55 | 574 | 105 | 935 | 104 | 2018 | 101 | 201 | 90 | 35 | 75 | 2.1 |
| 4-6 cm | 1820 | 55 | 506 | 106 | 24 | 119 | 95 | 107 | 14 | 90 | 58 | 75 | 4 |
| 8-10 cm | 2539 | 42 | 723 | 92 | 57 | 118 | 197 | 108 | 33 | 92 | 53 | n.d. | 3.4 |
| 12-14 cm | 3231 | 41 | 733 | 91 | 20 | 126 | 46 | 109 | 10 | 110 | 129 | 75 | 2.3 |
| 18-20 cm | 1657 | 59 | 506 | 109 | 10 | 123 | 17 | 109 | 14 | 82 | 129 | 76 | 1.7 |

注：n.d.—未检测到；ng/g—纳克/克；Cr：2，6，11，15四甲基十六烷；Ph：植烷；PMI：2,6,10,15,19五甲基二十烷；Archaeol：古醇；*sn2*-OH-Ar：*sn2*-羟基古醇；phytanol：植醇；phytanoic acid：植烷

**附表2 ROV06、HM101站位沉积物羧酸类生物标志化合物含量（ng/g）和碳同位素比值δ13C（‰）**

**Table2 The contents (ng/g) and δ13C values (‰) of carboxylic acid from the sediments of site ROV06 and site HM101**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *iso*-C15 | | *ai*-C15 | | | | | C16:1ω5 | | | | | | *i*-C17 | | | | *ai*-C17 | | C17:1ω6 | | | *ai*-C15/ *iso*-C15 | C16:1ω5/ *iso*-C15 |
| 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | | | | 含量 (ng/g) | | | δ13C (‰) | | | 含量 (ng/g) | | | δ13C (‰) | 含量 (ng/g) | δ13C (‰) | 含量 (ng/g) | | δ13C (‰) |
| ROV06 站位 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-2 cm | 126 | 51 | 326 | 67 | | | | 264 | | | 71 | | | 45 | | | 53 | 72 | 65 | 90 | | 62 | 2.6 | 2.1 |
| 6-8 cm | 262 | 55 | 591 | 69 | | | | 538 | | | 67 | | | 93 | | | 51 | 124 | 52 | 160 | | 68 | 2.3 | 2.1 |
| 12-14 cm | 31 | 67 | 80 | | 80 | | | 62 | | | 70 | | | 9 | | | 59 | 24 | 54 | 21 | | 78 | 2.5 | 2.0 |
| 18-20 cm | 92 | 73 | 109 | | 71 | | | 207 | | | 89 | | | 17 | | | 64 | 21 | 60 | 56 | | 79 | 1.2 | 2.3 |
| 24-26 cm | 109 | 66 | 206 | | 69 | | | | 392 | | | 80 | | | 34 | | n.d. | 50 | n.d. | 206 | | 84 | 1.9 | 3.5 |
|  | | | | | | | | | | | | | | | | | | | | | | | | |
| HM101 站位 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-2 cm | 178 | 53 | 186 | | | 43 | | | 221 | | | 60 | | | | 60 | 49 | 53 | 36 | 47 | | 48 | 1 | 1.2 |
| 4-6 cm | 171 | 43 | 181 | | | 42 | | | | 241 | | | 61 | | | 71 | 44 | 41 | 41 | 42 | | 42 | 1.1 | 1.4 |
| 8-10 cm | 199 | 42 | 210 | | | 43 | | | | 270 | | | 60 | | | 66 | 44 | 43 | 43 | 39 | 45 | | 1.1 | 1.4 |
| 12-14 cm | 273 | 51 | 295 | | | 50 | | | | 417 | | | 72 | | | 120 | 45 | 79 | 41 | 79 | 49 | | 1.1 | 1.5 |
| 18-20 cm | 127 | 44 | 204 | | | | 44 | | | 203 | | | 67 | | | 46 | 43 | 57 | 40 | 38 | 48 | | 1.6 | 1.6 |

注：n.d.—未检测到；ng/g—纳克/克

**附表3 ROV06、HM101站位沉积物正构烷烃含量（ng/g）**

**SupplementaryTable3 The content (ng/g) of *n*-alkane biomarkers from the sediment of site ROV06 and site HM101**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Content (ng/g) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C16 | C17 | | C18 | | | C19 | | | | C20 | | | | | C21 | | | | | C22 | | | | | C23 | | | | | | C24 | | | | | | | C25 | | | | | | | C26 | | | | | | C27 | | | | | | C28 | | | | C29 | | | | | C30 | | | C31 | | | C32 | | | | | C33 | | | CPI |
| ROV06站位 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-2 cm | 67 | 42 | | 105 | | | 25 | | | | 67 | | | | | 61 | | | | | 41 | | | | | 54 | | | | | | 34 | | | | | | | 48 | | | | | | | 36 | | | | | | 47 | | | | | | 31 | | | | 108 | | | | | 42 | | | 112 | | | 17 | | | | | 44 | | | 2.5 |
| 6-8 cm | 255 | 234 | | | 488 | | | 195 | | | | 278 | | | | 974 | | | | | 114 | | | | | | 160 | | | | | | 122 | | | | | | | 203 | | | | | | | 181 | | | | | | 211 | | | | | | 114 | | | | 490 | | | | 160 | | | 443 | | | 88 | | | | 204 | | | | 2.6 |
| 12-14 cm | 3 | 13 | | | 47 | | | | 25 | | | | 45 | | | | 42 | | | | | 29 | | | | | | 40 | | | | | | 27 | | | | | | | 55 | | | | | | | 42 | | | | | | 84 | | | | | 47 | | | | 188 | | | | 64 | | | 218 | | | 35 | | | | 90 | | | | 3.2 |
| 18-20 cm | 67 | 106 | | | 210 | | | | 92 | | | | | 136 | | | | 113 | | | | | 74 | | | | | | 110 | | | | | | 70 | | | | | | | 142 | | | | | | | 92 | | | | | | 284 | | | | 115 | | | | 508 | | | | 122 | | | 543 | | | 6 | | | | 192 | | | | 4.5 |
| 24-26 cm | 52 | 61 | | | 155 | | | | 73 | | | | | 107 | | | | 115 | | | | | 64 | | | | | | 88 | | | | | | 68 | | | | | | | 146 | | | | | | | 102 | | | | | | 132 | | | | 70 | | | 287 | | | | 98 | | | 299 | | | 42 | | 118 | | | | | | | 2.9 |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HM101站位 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-2 cm | 557 | | 999 | | | 313 | | | | 805 | | | | | 929 | | | | 673 | | | | | 918 | | | | | | 611 | | | | | | 1002 | | | | | | | 912 | | | | | | | 1024 | | | | | | 843 | | | | 2523 | | | | 877 | | | | 2997 | | | 375 | | | | | 1206 | | | | 2.7 | |
| 4-6 cm | 707 | | 1037 | | | 577 | | | | 731 | | | | | 1126 | | | | | 716 | | | | | 920 | | | | | | 666 | | | | | | 1053 | | | | | | | 834 | | | | | | 1149 | | | | | | 757 | | | | 2679 | | | | 788 | | | | 2894 | | | 304 | | | | | 1083 | | | | 3.0 | |
| 8-10 cm | 371 | | 1035 | | | 544 | | | | 792 | | | | | 889 | | | | | 676 | | | | | 834 | | | | | | 648 | | | | | | 1055 | | | | | | | 912 | | | | | | 1043 | | | | | | 778 | | | | 2413 | | | | 849 | | | | 2704 | | | 309 | | | | 1192 | | | | 2.3 | | |
| 12-14 cm | 1102 | | 1632 | | | 758 | | | | 911 | | | | | 1030 | | | | | 647 | | | | | 791 | | | | | | 532 | | | | | | | 914 | | | | | | | 789 | | | | | | 713 | | | | | | 503 | | | | 1718 | | | | 485 | | | 2035 | | | 263 | | | | 802 | | | | 2.7 | | |
| 18- 20 cm | 858 | | 950 | | | 449 | | | | 623 | | | | | 559 | | | | | 443 | | | | | 483 | | | | | | 384 | | | | | | | 703 | | | | | | | 473 | | | | | | 471 | | | | | | 531 | | | | 1323 | | | | 556 | | | 1649 | | | 261 | | | | 717 | | | | 2.4 | | |

注：ng/g—纳克/克；CPI=1/2[∑C25-35（奇碳数）/∑C24-34（偶碳数）+∑C25-35（奇碳数）/∑C26-36（偶碳数）]

**附表4ROV06、HM101站位沉积物正构烷烃碳同位素比值δ13C（‰）**

**Supplementary Table 4 The δ13C values (‰) of *n*-alkane biomarkers from the sediment of site ROV06 and site HM101**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | δ13C (‰) | | | | | | | | | | | | | | | | | |
| C16 | C17 | C18 | C19 | C20 | C21 | C22 | C23 | C24 | C25 | C26 | C27 | C28 | C29 | C30 | C31 | C32 | C33 |
| ROV06站位 | | | | | | | | | | | | | | | | | | |
| 0-2 cm | n.d. | n.d. | 30 | n.d. | 34 | 33 | 33 | 28 | 32 | n.d. | n.d. | 26 | n.d. | 32 | n.d. | 28 | n.d. | 29 |
| 6-8 cm | n.d. | n.d. | 31 | 32 | 30 | 30 | 33 | 26 | 32 | 27 | 30 | 26 | 27 | 32 | n.d. | 28 | n.d. | 30 |
| 12-14 cm | n.d. | n.d. | 26 | 32 | 30 | 30 | 31 | 28 | 28 | 27 | 30 | 29 | 30 | 32 | n.d. | 29 | 26 | 28 |
| 18-20 cm | n.d. | n.d. | 31 | 31 | 30 | 30 | 31 | 28 | 28 | 28 | 29 | 29 | 30 | 33 | 26 | 29 | 29 | 28 |
| 24-26 cm | n.d. | n.d. | 32 | 31 | 32 | 29 | 31 | 25 | 31 | 28 | 29 | 27 | 31 | 34 | 28 | 29 | 27 | 29 |
|  | | | | | | | | | | | | | | | | | | |
| HM101站位 | | | | | | | | | | | | | | | | | | |
| 0-2 cm | n.d. | 29 | 33 | 32 | 32 | 28 | 31 | 28 | 31 | 27 | 28 | 27 | 30 | 32 | 29 | n.d. | 28 | 28 |
| 4-6 cm | n.d. | n.d. | 30 | 32 | 29 | n.d. | n.d. | 28 | 28 | 27 | 26 | 30 | 30 | 29 | 29 | 29 | 31 | 28 |
| 8-10 cm | n.d. | n.d. | 30 | 33 | 30 | 32 | n.d. | 29 | 33 | 28 | 28 | 31 | 30 | 30 | 26 | 28 | 28 | 29 |
| 12-14 cm | n.d. | 30 | 30 | 31 | 31 | 29 | 22 | 31 | n.d. | 28 | 25 | 26 | 32 | 32 | 29 | 29 | 29 | 28 |
| 18- 20 cm | n.d. | 29 | 30 | 31 | 30 | 29 | 21 | 25 | 25 | 28 | 25 | 26 | 31 | 31 | 29 | 29 | 28 | 29 |

注：n.d.—未检测到；