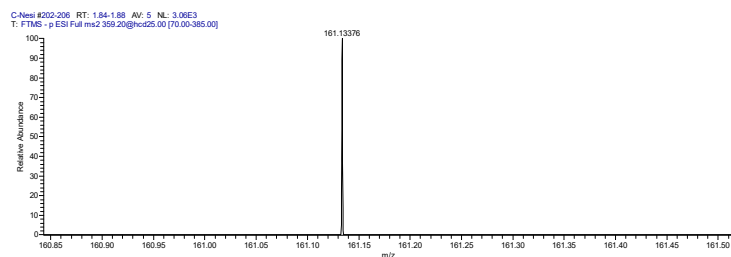
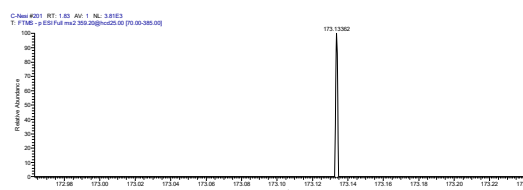


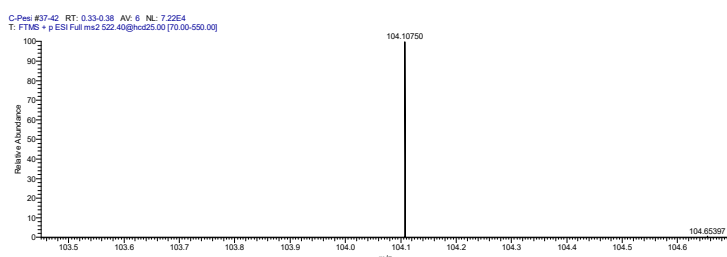
## Supplementary File



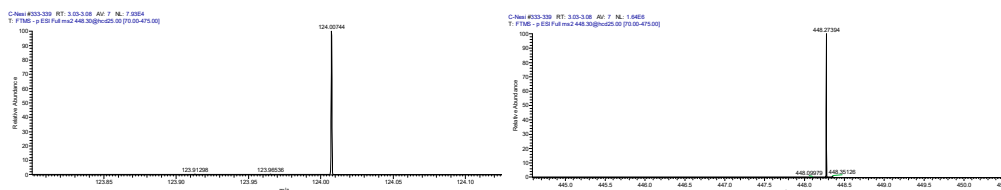
A. MS<sup>2</sup> product of bacillariolide II (359.2) extracted from *C. finmarchicus*. [C<sub>12</sub>H<sub>18</sub>]<sup>-</sup> = 161.1337 ((0.62 ppm).



B. MS<sup>2</sup> product of heterofibrin A2 (345.2) extracted from *C. finmarchicus*. [diyne-ene moiety closest to the carboxy terminal]<sup>-</sup> = 173.13362 (0.12 ppm).



C. MS<sup>2</sup> product of MGTS 20:4 (522.4) extracted from *C. finmarchicus*. [choline]<sup>+</sup> = 104.1075 (0.29 ppm).



D. MS<sup>2</sup> product of lysocopepodamide (448.3) extracted from *C. finmarchicus*. [taurine]<sup>-</sup> = 124.074 (0.32 ppm) and [base scaffold of C<sub>22</sub>H<sub>41</sub>NO<sub>5</sub>S + H<sub>2</sub>O]<sup>-</sup> = 448.2739 (0.18 ppm).

**Supplementary Figure S1.** The MS<sup>2</sup> product spectra for novel lipid observations.