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CORRIGENDUM

Corrigendum: Potential of temperature- and salinity-driven shifts in diatom compatible solute concentrations to impact biogeochemical cycling within sea ice

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In the published article, we detected an error in the calculated concentration of the metabolite homarine. Due to a manufacturing error in the commercial standard used in this study, we overestimated homarine concentrations by 20-fold. This compound was only quantified in the field sea-ice samples. The concentration of homarine in our field sea-ice samples (as shown in **Table 2**) should read 13 ± 5.3 μmol mol C^{-1} rather than the previously published 260 ± 110 μmol mol C^{-1}. This also alters our calculation of the potential compatible solute-based organic nitrogen release into the sea-ice environment (Table S6) from 9.83 × 10^{-4} mM N to 6.17 × 10^{-4} mM N, which still rounds to approximately 1 mM N mentioned in the text.

The corrected **Tables 2** and S6 are shown below:

Table 2. Absolute Intracellular Concentrations of Selected Metabolites in the *Nitzschia lecointei* Culture Grown at −1°C and Salinity 32 and the Utqiaġvik, AK Bottom Sea-Ice Sections

	Concentration (μmol mol C^{-1})[a]		
Compound	**Culture**	**Field**	**Fold Difference (Culture/Field)**
DHPS	3100 ± 81	390 ± 100	8
GBT	1200 ± 99	230 ± 97	5
Proline	960 ± 80	180 ± 110	5
Alanine	190 ± 17	120 ± 67	2
Choline	61 ± 6.7	26 ± 17	2
Cysteic acid	27 ± 2.2	15 ± 5.0	2
Valine	24 ± 1.4	13 ± 9.5	2
Histidine	14 ± 1.2	6.8 ± 4.0	2
Phenylalanine	8.5 ± 0.15	4.7 ± 2.4	2
Methionine	6.9 ± 0.5	12 ± 8.9	0.6
Taurine	5.9 ± 1.1	24 ± 17	0.2
Isoleucine	5.8 ± 0.43	2.4 ± 0.83	2

(continued)

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Table 2. *(continued)*

Compound	Concentration (μmol mol C^{-1})[a]		Fold Difference (Culture/Field)
	Culture	Field	
Tryptophan	4.9 ± 0.2	3.0 ± 1.4	2
Isethionic acid	2.9 ± 0.35	120 ± 51	0.02
Sulfolactic acid	1.5 ± 0.61	0.72 ± 0.36	2
Homarine	dl[b]	13 ± 5.3	–
Proline betaine	nd[c]	13 ± 5.7	–
Trigonelline	dl	1.1 ± 0.58	–
Hydroxyectoine	nd	1.1 ± 0.44	–

[a]Values are mean ± SD, $n = 3$. An additional 20% error based on particulate carbon measurement may be present.

[b]At or below detection limit.

[c]Not detected.

Table S6. Calculation of Potential Compatible Solute-Based Organic Nitrogen Release into the Sea-Ice Environment

Nitrogen-Containing Compatible Solute	Sea-Ice Bottom Measured Concentration (mmol CS/mol C)	Nitrogen Atoms in CS	mmol N/mol C	85% Dump of N-Containing CS	Sea-Ice Bottom Measured mol C/L (M)	CS-Derived mol N/L Estimate (mM)	Sea-Ice Bottom Measured $[NO_3^{-2}]$ (mM)
Proline	1.80E−01	1.00E+00	1.80E−01				
Glycine betaine	2.30E−01	1.00E+00	2.30E−01				
Homarine	1.32E−02	1.00E+00	1.32E−02				
Total			4.23E−01	3.60E−01	1.72E−03	6.17E−04	1.02E−02

The originally published **Tables 2** and S6 are also shown for reference:

Table 2. Absolute Intracellular Concentrations of Selected Metabolites in the *Nitzschia lecointei* Culture Grown at −1°C and Salinity 32 and the Utqiaġvik, AK Bottom Sea-Ice Sections

Compound	Concentration (μmol mol C^{-1})[a]		Fold Difference (Culture/Field)
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Methionine	6.9 ± 0.5	12 ± 8.9	0.6

(continued)

Table 2. *(continued)*

Compound	Concentration (μmol mol C^{-1})[a]		Fold Difference (Culture/Field)
	Culture	Field	
Taurine	5.9 ± 1.1	24 ± 17	0.2
Isoleucine	5.8 ± 0.43	2.4 ± 0.83	2
Tryptophan	4.9 ± 0.2	3.0 ± 1.4	2
Isethionic acid	2.9 ± 0.35	120 ± 51	0.02
Sulfolactic acid	1.5 ± 0.61	0.72 ± 0.36	2
Homarine	dl[b]	260 ± 110	–
Proline betaine	nd[c]	13 ± 5.7	–
Trigonelline	dl	1.1 ± 0.58	–
Hydroxyectoine	nd	1.1 ± 0.44	–

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Proline	1.80E−01	1.00E+00	1.80E−01				
Glycine betaine	2.30E−01	1.00E+00	2.30E−01				
Homarine	2.64E−01	1.00E+00	2.64E−01				
Total			6.74E−01	5.73E−01	1.72E−03	9.83E−04	1.02E−02