**Table S1: Final dilutions for isohaline melt treatments.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Core and section** | **Ice temperaturea (ºC)** | **Internal brine salinity** **(ppt)** | **Bulk ice salinity (ppt)** | **Volume sterile NaCl solution added (L)** | **Approximate total melt volume (L)** | **Dilution factor** |
| 13, 0-10 cm | −2.3  | 43 | 8.0 | 0.088 | 0.62 | 1.2 |
| 13, 10-30 cm | −3.7  | 67 | 6.5 | 0.34 | 1.4 | 1.3 |
| 13, 30-50 cm | −5.6  | 95 | 5.0  | 0.56 | 1.5 | 1.6 |
| 14, 0-10 cm | −2.3 | 43 | 8.0 | 0.077 | 0.54 | 1.2 |
| 14, 10-30 cm | −3.7 | 67 | 6.5 | 0.34 | 1.4 | 1.3 |
| 14, 30-50 cm | −5.6 | 95 | 5.0 | 0.59 | 1.6 | 1.6 |
| 15, 0-10 cm | −2.3 | 43 | 8.0 | 0.084 | 0.59 | 1.2 |
| 15, 10-30 cm | −3.7 | 67 | 6.5 | 0.33 | 1.3 | 1.3 |
| 15, 30-50 cm | −5.6 | 95 | 5.0 | 0.58 | 1.58 | 1.6 |
| 16, 0-10 cm | −2.3 | 43 | 8.0 | 0.086 | 0.58 | 1.2 |
| 16, 10-30 cm | −3.7 | 67 | 6.5 | 0.33 | 1.3 | 1.3 |
| 16, 30-50 cm | −5.6 | 95 | 5.0 | 0.58 | 1.6 | 1.6 |
| 17, 0-10 cm | −2.3 | 43 | 8.0 | 0.08 | 0.56 | 1.2 |
| 17, 10-30 cm | −3.7 | 67 | 6.5 | 0.32 | 1.3 | 1.3 |
| 17, 30-50 cm | −5.6 | 95 | 5.0 | 0.57 | 1.5 | 1.6 |
| 18, 0-10 cm | −2.3 | 43 | 8.0 | 0.086 | 0.60 | 1.2 |
| 18, 10-30 cm | −3.7 | 67 | 6.5 | 0.33 | 1.3 | 1.3 |
| 18, 30-50 cm | −5.6 | 95 | 5.0 | 0.59 | 1.6 | 1.6 |

aTemperatures calculated for the midpoint of each core section (5 cm, 20 cm, and 40 cm) using a linear model where the ice-water interface (0 cm) is −1.8ºC and the top of the ice core (68 cm) is −8.2ºC (measured value).