Table A: Sr, Nd, and Pb isotope ratios, rock types, and sampling data on high-latitude North Atlantic volcanic rocks.

| Sample[a)]/rock type | $^{87}Sr/^{86}Sr$[b)] | $^{143}Nd/^{144}Nd$[c)] | $^{206}Pb/^{204}Pb$[d)] | $^{207}Pb/^{204}Pb$ | $^{208}Pb/^{204}Pb$ | Sampling location[e)] | Water depth [m] |
|---|---|---|---|---|---|---|---|
| Vesteris Seamount | | | | | | | |
| 21880-5A/basanite | 0.703544 | 0.512933 | 18.664 | 15.513 | 38.545 | 73°31.05'N/09°08.60'W | 331 |
| Duplicate[f)] | | 0.512928 | | | | 73°31.26'N/09°08.69'W | 194 |
| 21885-3A/basanite | 0.703521 | 0.512967 | 18.536 | 15.476 | 38.221 | 73°35.82'N/09°02.47'W | 1660 |
| Duplicate | 0.703530 | 0.512993 | | | | | |
| 21889-A/tephrite | 0.703612 | 0.512870 | 18.734 | 15.525 | 38.635 | 73°31.48'N/09°11.89'W | 361 |
| | | | | | | 73°31.12'N/09°12.86'W | 263 |
| 21889-C/tephrite | 0.703597 | 0.512921 | 18.686 | 15.469 | 38.443 | 73°31.48'N/09°11.89'W | 361 |
| Duplicate | 0.703586 | 0.512929 | | | | 73°31.12'N/09°12.86'W | 263 |
| 21891-2A/alkali basalt | 0.703628 | 0.512923 | 18.673 | 15.532 | 38.574 | 73°31.86'N/09°11.80'W | 552 |
| Duplicate | | 0.512920 | | | | | |
| 21891-2E/mugearite | 0.703624 | 0.512942 | 18.622 | 15.499 | 38.512 | 73°31.86'N/09°11.80'W | 552 |
| Duplicate | 0.703626 | 0.512925 | | | | | |
| 21891-3A/basanite | 0.703587 | 0.512936 | 18.607 | 15.512 | 38.493 | 73°31.86'N/09°11.80'W | 552 |
| Duplicate | 0.703596 | 0.512947 | | | | | |
| Knipovich Ridge | | | | | | | |
| 17-230/tholeiite | 0.702918 | 0.513101 | 18.502 | 15.491 | 38.218 | 76°30.12'N/07°13.62'E | 3098 |
| | | | | | | 76°30.12'N/07°19.78'E | 2695 |
| Southern Mohns Ridge | | | | | | | |
| 23275/tholeiite | 0.703364 | 0.512937 | 18.269 | 15.424 | 37.943 | 71°57.14'N/00°42.46'W | 2671 |
| | | | | | | 71°58.20'N/00°43.76'W | 2355 |
| 23277-1/tholeiite | 0.703277 | 0.512973 | | | | 72°02.3'N/00°36.9'W | ca. 2700 |
| 23287/tholeiite | 0.703338 | 0.513046 | 18.170 | 15.432 | 37.905 | 72°22.4'N/01°39.2'W | 2580 |
| | | | | | | 72°22.3'N/01°38.9'W | 2440 |
| 23288-1/tholeiite | 0.703266 | 0.513020 | 18.173 | 15.435 | 37.900 | 72°22.48'N/01°39.98'E | 2573 |
| | | | | | | 72°22.26'N/01°38.44'E | 2401 |
| 23291-2/tholeiite | 0.703320 | 0.513001 | | | | 72°23.7'N/01°30.1'E | ca. 3200 |
| 23292-1B/tholeiite | 0.703371 | 0.513008 | 18.079 | 15.428 | 37.762 | 72°24.28'N/01°44.92'E | 3080 |
| | | | | | | 72°23.91'N/01°42.79'E | 2698 |
| 23295-3/alkali basalt | 0.703534 | 0.512966 | 18.750 | 15.452 | 38.362 | 71°08.90'N/05°54.85'W | 1879 |
| | | | | | | 71°09.29'N/05°53.74'W | 1773 |
| Eggvin Bank | | | | | | | |
| 21861-3/off-axis tholeiite | 0.703224 | 0.512971 | 18.983 | 15.545 | 38.780 | 70°56.23'N/13°01.05'W | 38 |
| | | | | | | 70°56.25'N/13°00.95'W | 35 |
| 21862-E/seamount alkali basalt | 0.703465 | 0.512858 | 18.809 | 15.527 | 38.645 | 71°19.33'N/11°08.92'W | 542 |
| | | | | | | 71°19.51'N/11°09.42'W | 464 |
| Central Kolbeinsey Ridge | | | | | | | |
| 21844/tholeiite | 0.702807 | 0.513153 | 17.979 | 15.423 | 37.561 | 69°27.90'N/15°59.42'W | 1226 |
| | | | | | | 69°27.79'N/15°56.74'W | 1014 |
| 21847/tholeiite | 0.702904 | 0.513102 | 18.007 | 15.435 | 37.624 | 69°39.58'N/15°32.33'W | 983 |
| | | | | | | 69°40.16'N/15°33.13'W | 986 |
| 21848/tholeiite | 0.702744 | 0.513156 | 18.022 | 15.454 | 37.657 | 69°48.53'N/15°42.05'W | 1116 |
| Duplicate | 0.702752 | | 18.014 | 15.439 | 37.649 | 69°48.24'N/15°40.77'W | 980 |
| 21850/tholeiite | 0.702793 | 0.513153 | 18.001 | 15.439 | 37.612 | 70°07.08'N/15°17.80'W | 1346 |
| | | | | | | 70°07.23'N/15°19.06'W | 1250 |
| 21853-2/tholeiite | 0.702809 | 0.513150 | 18.219 | 15.482 | 37.841 | 70°20.06'N/15°23.80'W | 925 |
| | | | | | | 70°20.35'N/15°24.10'W | 930 |
| 21854/tholeiite | 0.702740 | 0.513167 | 18.043 | 15.439 | 37.620 | 70°26.59'N/14°48.38'W | 1169 |
| | | | | | | 70°26.91'N/14°46.56'W | 961 |
| 21856-3/tholeiite | 0.702839 | 0.513132 | 17.998 | 15.431 | 37.568 | 70°37.43'N/14°31.58'W | 1001 |
| | | | | | | 70°37.81'N/14°31.11'W | 754 |
| Max. analytical error ($2\sigma$) | ±0.000020 | ±0.000015 | ±0.013 | ±0.016 | ±0.038 | | |

a) Starting digits 21 and 23 indicate samples recovered during Polarstern cruise ARK VII/1 and Meteor cruise 7/3, respectively. Sample 17-230 was recovered during Polarstern cruise ARK VII/2. b) Sr isotope ratios are normalized to $^{86}Sr/^{88}Sr=0.1194$. NBS standard $SrCO_3$ 987 (n=11) has been measured with $^{87}Sr/^{86}Sr=0.710225\pm0.000011$ ($2\sigma_m$). c) Nd isotope ratios are normalized to $^{146}Nd/^{144}Nd=0.7219$. La Jolla standard (n=14) has been measured with $^{143}Nd/^{144}Nd=0.511836\pm0.000014$ ($2\sigma_m$). d) Pb isotope ratios are relative to values of $^{206}Pb/^{204}Pb=36.738$, $^{207}Pb/^{204}Pb=17.159$, and $^{208}Pb/^{204}Pb=36.744$ for NBS standard 982. Vesteris, Mohns and Knipovich Ridge ratios are corrected for mass fractionation of 0.12% per a.m.u., Eggvin Bank and Kolbeinsey Ridge ratios are corrected of 0.15% per a.m.u. based on multiple standard measurements during the corresponding run series. Blank contributions were <0.5‰ for Pb, <0.2‰ for Nd, as well as <0.01‰ for Sr and are considered not to be significant. Pb measurements were performed on hand-picked 2.5N HCl leached glass (Kolbeinsey and Mohns Ridges) or total rock grains (other locations), Sr and Nd measurements were performed on 6N HCl leached glass (Kolbeinsey and Mohns Ridges) or total rock powders (other locations). e) Two locations indicate start and end positions of a dredge haul, respectively, one location indicates TV grab sampling. f) Duplicates yield identical results within errors and demonstrate the analytical significance of our isotope measurements.