

Annual record of boron isotopes of massive *Porites* coral skeleton from Chichijima Island in the western North Pacific

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Long-term pH record in the surface ocean is limited to the very recent period, for the last three decade, hampering our understanding of natural variability of surface seawater pH and recent anthropogenic decline due to surface ocean carbon dioxide concentration increase (ocean acidification). Boron isotope composition of skeleton of long-living massive *Porites* coral, a known seawater pH proxy, can potentially provide continuous, long-term record. Here we present result of boron isotope measurement for the century-long living massive *Porites* coral from Chichijima Island in the western North Pacific in annual time resolution. Boron isotope ratio was measured by using multi-collector ICPMS, Thermo Scientific *Neptune* installed at Kochi Core Center, in a precision of ± 0.1 permil (2 standard deviation). A method of boron isotope measurement for the coral sample was modified from the previous application, namely anion exchange column was skipped to make the measurement simple and enhance the sample throughput. The new annually resolved boron isotope record shows good agreement with previously reported one from Guam Island, at least in decadal timescales.

Keywords: boron isotope, multi-collector ICPMS, ocean acidification