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Stable oxygen isotopes in Benthic Foraminifera Recent of the Northeast Pacific

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In this study was determined stable oxygen isotopic composition of benthic foraminifera, where Cibicides spp./Planulina spp. preferentially occupies very shallow infaunal niches, whereas and Uvigerina peregrina occupy an intermediate infaunal microhabitat. Sediment samples were collected using a Smith-McIntyre grab, forming a spatial arrangement of 14 stations in the range of 70-500 m depth in the Northeast Pacific. The d18O of Cibicides spp., Planulina spp. and U. peregrina (‰ vs. PDB) were measured using an FINNIGAN Delta plus V isotope ratio mass spectrometer coupled to a Gas Bench II, at the CICIMAR's Stable Isotope Laboratory of the National Polytechnic Institute of Mexico (IPN). When compared with d18O values of calcite formed in equilibrium with bottom waters, Cibicides spp./Planulina spp. forms its test in close equilibrium with bottom water d18O. U. peregrina calcify with a constant offset to calculated equilibrium calcite. In all areas, there is no systematic relationship between the foraminiferal microhabitat depth and the Dd18O between foraminiferal and equilibrium calcite. Moreover is needed determine locally benthic foraminiferal offsets for minimizing the uncertainty in the reconstruction based oxygen isotope records in paleoceanographic studies.