Test density of Ammonia sp. under variable pH

*Takashi Toyofuku¹, Yukiko Nagai³, Katsunori Kimoto¹, Osamu Sasaki²

1. Japan Agency for Marine-Earth Science and Technology (JAMSTEC), 2. Tohoku university, 3. YNU

Foraminifera is major calcium carbonate producer in the sea (Langer et al., 1992, 1997? Sciebel et al., 2002). Ocean acidification is a threat on the marine organisms. The influence of ocean acidification on the calcareous foraminifera is the interesting topic for marine science community. Here, we try to measure test density (i.e. CT value) of cultured benthic foraminifera by micro x-ray computer tomography (MXCT). The individuals are grown under different pH settings. The CT value shows relatively lesser variability among experimental settings. It is not statistically significant the chamber size variability nor its increase among variable pH setting, although we also compare the chamber volume and it's increase among the condition. Generally, the size of chamber is increasing with growth at any conditions. The second chamber is smaller than the initial chamber with all individuals. Even the size of chamber increasing with growth from second added chamber, somewhat smaller chamber are added at the beginning of new whole of spiral. When new whole is starting, the older chamber is occupy some part of new chamber even though the outline of the chamber smoothly connected from older one-earlier chamber. This point is different from previous study with planktonic species (Fig. 5 of Sasaki et al., 2016).

Keywords: foraminifera, calcification, computer tomography