

1) Difference of Mg/Ca values between oxidative and reductive cleaning methods

After Kubota et al. (2010) have been published, foraminiferal samples were re-picked from randomly selected fifteen horizons of KY core and Mg/Ca analyses of these samples are conducted after cleaned by reductive methods. The results indicate that the reductive cleaning methods cause 3-15% decrease in Mg/Ca values. Comparison between reductive and oxidative cleaning method in temperature scale ($\text{Temperature } [^{\circ}\text{C}] = \ln (\text{Mg/Ca} [\text{mmol/mol}]/0.38) / 0.089$) is shown in Fig. S-1. The temperature with oxidative methods show 0.73 °C, on average among fifteen horizons, higher values than those with reductive methods, indicating additional dissolution of Mg with reductive methods.

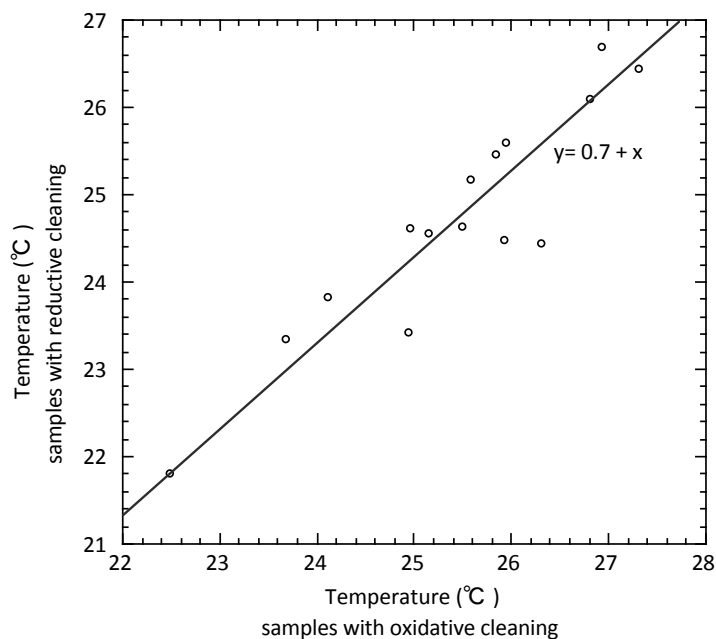


Fig. S-1. Comparison between reductive and oxidative cleaning method in fifteen horizons of KY core.