Applicability of the long chain diol index in the East Sea (Sea of Japan)

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Reconstruction of sea surface temperatures (SSTs) is one of the most important factors to understand paleoclimate changes. Rampen *et al*. (2012) [1] introduced the long chain diol index (LDI) expressed as the C_{30} 1,15-diol abundance relative to those of C_{28} 1,13-, C_{30} 1,13- and C_{30} 1,15-diols. The LDI in the global core top sediments showed a strong linear relationship with SSTs and thus a potential as a proxy for palaeo-SST reconstruction. However this paleothermometer needs to be further validated in various environments before it can be routinely applied for the paleoclimate studies. In this study we assessed the applicability of the LDI in the Ulleung basin of the East Sea (Sea of Japan), by analysing three sediment cores ARA05 (24cm), ES14-BC01 (45cm), and ES14-BC03 (40cm). We will present the LDI records in comparison with those of the more commonly used UK'37 and the instrumental SST data collected for each core site.

[1] Rampen *et al*. 2012. Long chain 1,13- and 1,15-diols as a potential proxy for palaeotemperature reconstruction. *Geochimica et Cosmochimica Acta*. **84**, 204-216.