{rokbox title=|Sergestes arcticus :: Photo credit: Copyright © 2014 Oxford University Press| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-respiracion-ets-crustaceos-suprabentonicos-ideados-herrera-et-al-2014-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-respiracion-ets-crustaceos-suprabentonicos-ideados-herrera-et-al-2014.jpg{/rokbox}

A. Herrera, M. Gómez, T.T. Packard, **P. Reglero, E. Blanco, C. Barberá-Cebrián**, 2014. **Potential respiration estimated by electron transport system activity in deep-sea suprabenthic crustaceans off Balearic Islands (Western Mediterranean)**
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Abstract: ETS is an acronym for the activity of the respiratory electron transport system; the ETS assay is a biochemical method for estimating the "potential" respiration (Φ). We apply this technique to suprabenthic species captured at three depths (250 m, 650 m and 850 m) in two different locations: Cabrera (Algerian subbasin) and Sóller (Balearic subbasin) during the IDEADOS survey during summer 2010. The aim of this study was to compare specific Φ between areas and between three depths to identify differences in the suprabenthos physiological state related to nutritional conditions. Specific Φ, expressed in unit of μl O2 h− 1 mg prot− 1 was not significantly different between species. Mean values were for the decapods: *Plesionika heterocarpus*, 8.4 ± 7.9; *Gennadas elegans*, 8.3 ± 2.9; and *Sergestes arcticus* 7.3 ± 4.6. Within the euphausiids specific Φ averaged 6.5 ± 4.2 for *Thysanopoda aequalis* and 9.8 ± 5.1 for *Meganyctiphanes norvegica*; while for the mysids it ranged from 7.7 ± 4.4 for *Boreomysis arctica* and 2.1 ± 0.6 for *Eucopia unguiculata*. The comparison of specific potential respiration (Φ), with the pooling of the data of all the species, showed differences between the two locations, being higher in Cabrera. However, no significant differences between the different depths of each locality were found. The slope of the log Φ–log biomass plot was 0.93 ± 0.09 for Cabrera and 0.64 ± 0.11 in Sóller. We interpret these differences as indicating that the suprabenthos in the Cabrera area, as compared to the Sóller area, has been well-nourished.

Keywords: Suprabenthos, ETS, Respiration, Kleiber law, Mediterranean Sea, Nephloid layer