



Bacterial and dark community respiration in the euphotic layer along a transect from the Mauritanian upwelling into the subtropical Atlantic gyre

T. Reinthaler, G. J. Herndl

Dept. of Biological Oceanography, Royal Netherlands Institute for Sea Research, Texel, The Netherlands (thomas.reinthaler@nioz.nl)

While bacterial production is frequently measured and generally used as an index of microbial carbon uptake, measurements of bacterial remineralization are much less frequently performed. Consequently, our knowledge on the bacterioplankton growth yield is generally rather limited and largely restricted to nearshore systems. We were following a transect from the Mauritanian upwelling into the gyre of the subtropical Atlantic. From the more productive stations in the upwelling region towards the oligotrophic gyre, total community respiration and bulk bacterial respiration decreased by 85% in the top 40 m of the water column. Total community respiration in the depth range of 50 to 130 m was $\sim 50\%$ higher than bacterial respiration with no longitudinal trend detectable. Bacterial production measured via ^3H -Leucine incorporation showed a similar pattern to respiration. Bacterial growth efficiency was, on average 20%, similar to bacterial growth yield estimates obtained recently from various other sites.