

***Interactive comment on “Organic biomarkers in deep-sea regions affected by bottom trawling: pigments, fatty acids, amino acids and carbohydrates in surface sediments from the La Fonera (Palamós) Canyon, NW Mediterranean Sea” by E. Sañé et al.***

**Anonymous Referee #1**

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This study examines the impact of bottom trawling on organic biomarkers in the deep sea. I found the description of the work hard to follow, especially the sections on sampling and statistical analysis. It is unclear from Fig. 1 which are the trawled and reference areas. The legend of the figure does not say what the red and blue symbols are. A potential problem of spatial segregation between trawled and reference stations arises if the stations with different colours reflect different levels of disturbance. In this case the authors should discuss the potential implications of this spatial segregation

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for the interpretation of their results - i.e. to what extent the observed differences in organic biomarkers between trawled and reference areas might have occurred because of spatially varying processes other than anthropogenic disturbance. There is also a problem with the analysis of the data. Season and level of disturbance are crossed factors and should be examined together in factorial ANOVAs.

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