

Response to Referee #2:

We are grateful that the referee took time to review this manuscript. Next, we show the comments of the referee and our answers in bold.

I think the term 'epiphyta' is more appropriated than 'epibiota' to the study, because it is well accepted in the scientific community. **We will change it.**

P 2625. Line 25. It should be pointed out here that if the aim of the paper is, for instance, to use *Posidonia* as a trace metal biomonitor in seawater, it is not necessary to analyze roots an epiphyta. In fact, epiphytes and roots are not good biomonitors of trace metal pollution in seawater. This paragraph should be rearranged. The good quality of this study dealing with the metal accumulation trends in all plant compartments, doesn't exclude the high quality of another researches (i.e. biomonitoring). **Apologies, we did not mean to exclude the merit of other previous works. We just wanted to show that there is few information about concentration of trace elements in roots and epiphyta in *Posidonia oceanica*. We will rearrange the paragraph to make this point clearer.**

P2627. L 20. Little information is given about epiphytes sampling. Which was the quantity collected and weighed? Quantity of leaves? As known, the presence of epiphytes in *Posidonia* leaves is highly variable. This information could be consent the repetition of the experience by other researchers. **We will add this information.**

P2628. L. 15 and Table 1. **We noted that in Table 1 the certified and recovery value of *Ulva lactuca* as regards As was in the line of Li, we will correct this mistake.** The AA declare that the measured values 'were in agreement with certified values' (Table 1). I'm sorry, but from data reported in Table 1, excluding Cd, it seems not correct (i.e. 77, 76 % of recovery for Cu; and 128% for Li: : etc.). Please clarify this point. **We will rewrite saying that most of the trace elements for which we had the certified value were within the limits of required performance (recoveries 80 - 120%), nevertheless, in the case of As and Cu, values were close but did not fall within this range.** Was the mineralization method checked for the other elements? I noticed that about 15 elements out of 20 were not checked (the majority, table 1). **In the reference materials we could check the recovery of the trace elements that were certified (6 elements taking into account both reference materials). We will add the indicative values of the elements from the two reference materials used (As, Co, Cr, Cs, Ni, Rb, Tl and V for the reference material BCR-060 and Fe and Mn for the reference material BCR-279) that they are also useful to have an estimation of the accuracy of the mineralization method.** Then, I assume the AA also used spiked *Posidonia* (parts) samples for the lacking elements with the respective recoveries, in order to check the accuracy. Please clarify and add this information. **We did not spike trace elements in *P. oceanica* parts. Using certified references values are a more agreed procedure to assess recovery, even in studies measuring a wide range of trace elements, where it is hard to find reference materials with a similar matrix to the one analyzed, containing certified values for most trace elements, not all analyzed elements have a certified value (e.g. Perez et al, 2007 Science of the total environment 376:51-59). We used two reference materials and we included the measured values we got of the trace elements which did not have certified values of the reference material, in case anyone wanted to compare them. Additionally, to be on the safe side, we used another reference material (DORM-3) in the analysis since it has more trace elements that were certified (Cr, Fe and Ni) which are indicative in the other reference materials. We did not include the results in the manuscript because it has a completely different matrix (fish protein) than the one we analyzed in the present experiment. The recoveries (indicated in brackets) of all the certified values of the**

**reference material DORM-3 were: As (95%), Cd (102%), Cr (106%), Cu (84%), Fe (91%), Ni (105%), Pb (104%) and Zn (90%).**

P. 2638. Again, this paragraph is not clear. Several studies cited by the AA (Lafabrie et al., 2007; Gosselin et al., 2006; Campanella et al., 2001; Conti et al., 2007, 2010; Tranchina et al., 2005, etc) stated that Posidonia (mainly leaves) is a good biomonitor for trace elements in seawater. The study of roots and epiphyta are not necessary in this kind of biomonitoring studies because they do not reflect the metal concentrations in seawater. This part should be rewritten taking into account this aspect. **We agree with the referee and will rewrite the paragraph accordingly.**

Thanks for helping to improve the manuscript,

The authors