

Interactive comment on “Adsorption, desorption and fractionation of As(V) on untreated and mussel shell-treated granitic material” by N. Seco-Reigosa et al.

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Reviewer 1 General comments The scientific originality and content of the article largely justify publication in this journal nearly in the present form. This very interesting article deals with the utilization of different byproducts as material to adsorb arsenic. This paper, as clearly indicated, is a further contribution on the same topic of previous papers published by the authors to deepen the retention/release processes of arsenic. The article falls within the aims of the journal, and contains new scientific discoveries that are correctly explained. The title reports the important features of the work, and the abstract describes adequately the paper. The article is well structured and organized,

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rich of interesting results, and ideas that bring a noteworthy original contribution to the scientific knowledge in the field of environmental problems related to arsenic pollution. The work carried out is considerable, the experimental parts are adequately described and include sufficient data from replicated experiments and statistical analysis. All the theories and conclusions are well supported by the numerous data obtained. All the figures and tables are appropriate. The paper contains many up-to-date references. ANSWER: Thank you very much for your comments.

Specific comments There are some minor remarks.

Materials and methods The nature of the mixture of granitic materials should be explained more in detail. ANSWER: Thank you for your comment. We have corrected the paragraph, adding a new sentence (blue fonts), resulting: “c) mixtures of the granitic material + 12 t ha⁻¹ and 24 t ha⁻¹ fine mussel shell (which showed higher adsorption potential than coarse shell in preliminary trials); concretely, considering an effective soil depth of 20 cm and a soil bulk density of 1 g cm⁻³, samples of 400 g of the granitic material were mixed with 6 or 12 g of fine mussel shell per kg of granitic material, then shaking the mixtures for 48 h in 2 L polypropylene bottles to achieve homogenization”.

References of the analytical methods used are reported for available P, but not for other parameters, for example pH, Carbon, Nitrogen. I suggest to add references for all the used methods. ANSWER: Thank you for your comment. We have included additional references (blue fonts).

Results and discussion I feel that it would be better to use “standard deviation” in table 1. ANSWER: Thank you for your comment. We have included SD values (blue fonts) in Table 1.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/6/C1606/2015/sed-6-C1606-2015-supplement.pdf>

Interactive comment on Solid Earth Discuss., 6, 3419, 2014.

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