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Biogeosciences Discussions

Interactive comment on "Biochar carrying hydrocarbon decomposers promotes degradation during the early stage of bioremediation" *by* P. Galitskaya et al.

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Dear prof. Romantschuk, Thank you for your attention to our manuscript, for your accurate reading and comments. Here are the answers: 1. Comment 1. This sentence will be reworded as follows: "Many authors report high efficiency of biostimulation and low additional benefit from bioagumentation" 2. Comment 2. We checked the viability in the growth test (data not shown in the manuscript). We introduced biochar with immobilized stains into LB, and observed the changes of optical density. Biochar without microbes was used as a control. 3. Comment 3. We checked carefully lines 160-163 as well as Fig. 2. All the data presented are correct. 4. Comment 4. We will rephrase this sentence as follows: "Petroleum hydrocarbons may not be fully used by microbes

since they contain a lot of recalcitrant compounds" 5. Comment 5. We agree. PAHs belong to toxic compounds, therefore this comment does not contradict to what is written on lines 180-181. 6. Comment 6. According to your suggestion, this sentence was rephrased as follows: "In our case, biochar addition resulted in an increase of Actinobacteria (day one) and Proteobacteria (days 28 and 84) which is in line with data presented by other authors Thus, Proteobacteria, especially Alpha- and Gamma-, were predominant in oil polluted soils because many proteobacterial species are capable to degrade hydrocarbons. The relative abundance of Actinobacteria usually increases after oil pollution because species belonging to this phylum are known as degraders of recalcitrant organic compounds (Khodadad et al., 2011; Qin et al., 2013; Shahi et al., 2016; Xu et al., 2016)". 7. We will meet your requirement after correction of the manuscript according to your comments and to the comments of the other reviewers.

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