

Interactive comment on “Artificial Radionuclides in Squid from northwestern Pacific in 2011 following the Fukushima accident” by Wen Yu et al.

Wen Yu et al.

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We thank the anonymous reviewer for his useful comments. We largely agree with the points raised and considered many of them in the revised version of the manuscript. In the following, our changes are listed next to the points raised.

General comments;

Temporal change of radionuclides by the Fukushima NPP accident is larger than the ones of released events, therefore it is difficult to adapt the Concentration Ratio (CR). On the other hands, the CR is useful to compare the Fukushima Dai-ichi NPP accident

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with other previous release events at the specific period. Even if the public did not eat seafood affected by the Fukushima Dai-ichi NPP accident, the authors quantitatively showed that dose rate by the Fukushima Dai-ichi NPP accident, included the Ag-110m data, should be quite smaller than the one by natural radionuclides, Po-210. Therefore, this paper is suitable for the publication of the Biogeosciences with following minor revisions.

Specific comments;

Point 1: Line 30 ; Radionuclides released to the North Pacific due to atmospheric deposition and direct discharge. The authors should describe the transport process in more detail by referring Aoyama et al. (2016).

Reply: We agree to this point. The main transport pathway and the estimated transporting speed for surface cesium was added in Line 31-32.

Point 2: Line 108 ; Explanation is needed for “DCF”.

Reply: We agreed with this point. The explanation for “DCF”, exposure-to-dose conversion factor, was added in Line 108.

Point 3: Line 146 ; I understand that there is no CF data for Ag-110m in squid. On the other hand, IAEA. Technical Reports Series No.422 show the high CF for marine organism. These information is useful for the discussion.

Reply: We agreed with this point. Relevant information of CF for Ag in molluscs was added in Line 151-152.

Point 4: Line 157 ; $^{137}\text{Cs}/^{134}\text{Cs}$ -> Cs-137

Reply: We agreed with this point. The text “ $^{137}\text{Cs}/^{134}\text{Cs}$ ” was changed into “137Cs” in Line 160.

Please also note the supplement to this comment:

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<https://www.biogeosciences-discuss.net/bg-2018-133/bg-2018-133-AC1-supplement.pdf>

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-133>, 2018.

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