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Interactive comment on “Chlorophyll a specific $\Delta^{14}\text{C}$, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values in stream periphyton: implications for aquatic food web studies” by N. F. Ishikawa et al.

Anonymous Referee #2

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The manuscript by Ishikawa et al. showed that chlorophyll a compound-specific $\Delta^{14}\text{C}$, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values in stream periphyton. The data and implications are novel and may be useful for future stream food-web studies. The manuscript was well written and the results are clear, but I have a few concerns on the manuscript.

- 1) P11065L21 It is unclear why you used the both chlorophyll a and phaeophytin a . If you used the both you should explain the reasons.
- 2) The mechanisms to explain the differences in $\Delta^{14}\text{C}$ between bulk and chlorophyll- a -specific in litters were unclear. I am interested in the data because I guessed the $\Delta^{14}\text{C}$ of bulk would take lower values than that of chl- a . So, I recommend you to discuss more

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about the phenomenon.

3) I understood some of implications of this study in the last paragraph. But in the most of the periphyton samples, the isotope values of the bulk and chl-a specific are very close. I think from this study, we should not consider the chl-a specific isotopes in the most cases. You should emphasize which situation the chl-a specific isotopes are useful to analyze stream food web, e.g., habitats and algal compositions.

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