

The authors present another insightful study on the preservation of water samples for radiocarbon and dissolved inorganic carbon (DIC) analysis, employing methods that avoid the use of toxic preservatives such as mercury. This work is particularly significant as it demonstrates that sample integrity can be maintained for up to 285 days for seawater and 126 days for groundwater using a combination of filtration and benzalkonium chloride (BAC) treatment. These extended preservation times represent a clear advancement over the authors' previous findings.

Overall comment: The newly added supplemental flowcharts effectively clarify the study's methodology. To further enhance usability, it would be beneficial to include a final summary flowchart—ideally in the form of a decision tree—to guide researchers in selecting the most appropriate preservation method for either groundwater or seawater samples.

Minor adjustments:

Line 14: The freshwater sample treated with ~~that had undergone a BAC addition treatment~~ showed ~~the~~ no alteration of DIC.

Line 24: For global understanding of ocean water behaviors, it is necessary to analyze ~~needs analysing~~ samples from various regions over long timeframes, . . .

Line 67: possibly due to interaction with ~~something~~ components in the seawater,

Line 109: While SW can be considered as a brackish water sample, ~~but~~ it is treated as a coastal seawater sample in this study.

Line 188: These calculated values do not align with the measured ^{14}C concentrations, suggesting it ~~can be confirmed~~ that atmospheric CO_2 contamination **is unlikely**.

Line 230: It is anticipated that the boost effect will be more pronounced in instances ~~s~~ where . . .

Line 231 - 232: The SW in this study was sampled at a tidal flat location ~~in location at the tidal flat~~ . .

Line 251: the results were consistent with ~~matched those of~~ previous studies

Line 287: this $\delta^{13}\text{C}$ change seems to be negligible, given its small magnitude and the associated uncertainty which ~~that it~~ only became detectable through sugar-induced microbial activity magnification. . . .