

Dear Drs. Metcalf and Flowers,

Thank you for submitting your revised manuscript to *Geochronology* and for thoughtfully considering the revision requests that the three reviewers provided.

After discussion with editors of *Geochronology*, I believe it is most appropriate to keep this manuscript as a technical note. In their view and mine, the length of the manuscript is secondary to the manuscript's content in terms of determining which manuscript type is most important. While this manuscript is longer than a few pages, it clearly fits reports "new developments in or novel aspects of methods, techniques, or tools that are relevant for scientific investigations within the journal scope" which is most appropriate for a technical note. Further, I do not recommend that the authors shorten this manuscript, as there is a lot of very useful information in it and a shorter manuscript would likely involve cutting valuable details. Finally, although rare, we have published longer technical notes in the past (e.g., Gautheron et al. 2021, cited in this manuscript), so there is precedent for having a longer technical note when it is warranted as it is here.

Other than the manuscript type, I only have small technical corrections which are highlighted in red text below.

Line 16: I recommend avoiding referring to the Labview code as open, in line with reviewer comments. Recommended change: "...~~open~~^{editable} Labview code for instrument communication and automation that is ~~open-and~~ straightforward to update."

Line 18: Change to "small gas ~~volumes~~ ^{amounts} (<0.1 fmol)" since fmol is an amount.

Line 76 and elsewhere: Consider saying "~~stainless~~ steel" rather than just "steel".

Line 154: I recommend citing Idleman et al. (2018) here after "continual ramped heating techniques", since this is the first time you mention CRH and some readers may not be familiar with what you're referring to.

Table 1/Line 177: Consider indicating the manufacturer or supplier you used for the T-slotted framing, as with other components. E.g., 80/20, McMaster Carr. I remember not knowing where to look for this stuff when I first started.

Line 284: Change to "large gas ~~volumes~~ ^{amounts}".

Line 480: I find the order of this sentence a little confusing. Consider rewording as, "~~To deliver the desired He amount, s~~^{To deliver the desired He amount, s}Significantly larger pipettes would have required lower ~~fill~~ ^{fill} pressures in each tank ~~to deliver the desired He amount~~ than could be reliably measured with our capacitance manometer."

Line 483: Please remove the personal communication reference, as this is not allowed under journal policy. Suggested rewording: "Significantly smaller volume pipettes can be problematic to fabricate because the flexibility of the metal and the valve seat can become a significant proportion of the pipette volume, ~~and which we infer could~~ lead to inconsistent gas delivery (~~T. Becker, person. comm.~~)."

Figure 5: The caption says the abbreviation for capacitance manometer is CP but in the figure it is labeled CM – please change one or the other for consistency.

Lines 671 and 677: Change to "small gas ~~volumes~~ ^{amounts}" since fmol is an amount.

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