Jaydev Upponi

Elizabeth Sheeley

***Journal of Visualized Experiments***

Dear Jaydev Upponi & Elizabeth Sheeley:

The authors would like to thank the editors and reviewers for their time and advice. We greatly appreciate everyone’s efforts and expertise to construct a great publication.

A summary of our revisions and responses can be found in the table below. The “Track Changes” feature was used to indicate changes in the manuscript.

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| --- | --- |
| **Comments** | **Response** |
| The editor highlighted of the headings of steps 1, 3, 4, and 5. | The authors are confused by this comment. Is the Editor asking the authors to highlight the headings or did the Editor highlight the headings on behalf of the authors? Regardless, the Headings 1, 3, 4, and 5 of the Protocol section have been highlighted in the revised manuscript and the changes are noted with “Track Changes”. |
| The Short Abstract is a giant run-on sentence that should be broken up. | The Short Abstract has been broken up into separate sentences. Changes are highlighted with “Track Changes” in the revised manuscript |
| Step 3.7 should begin in active voice. | Step 3.7 has been changed to active voice. Changes are noted with “Track Changes” in the revised manuscript |
| The protocol section is just within the page limit when short steps are combined. Any increase following peer review may put it over the page limit. | The authors appreciate the helpful warning about the page limit. No major revisions were added to the Protocol section that would change the length and violate the page limit. None of the reviewers’ comments asked for additional details on the specific steps of the method. In fact, the reviewers generally wanted less protocol description and more results and analysis. |
| Please take this opportunity to thoroughly proofread your manuscript to ensure that there are no spelling or grammar issues. Your JoVE editor will not copy-edit your manuscript and any errors in your submitted revision may be present in the published version. | The authors have thoroughly proofread the manuscript in our best effort to minimize spelling and grammar issues. |
| Often reviewers request the addition of a large amount of details or explanations. We realize that, especially in the protocol section, brevity and clarity are important for a JoVE publication and expect the focus to be on providing a framework for the method presented rather than a comprehensive review of the research field. Please address each comment in your rebuttal and note if you choose not to include the requested information in the text and the reasoning behind this decision. | Acceptance or rejection of a suggestion or revision has been noted in this letter along with justification for decisions with regard to omission of a revision. All accepted changes have been noted using the “Track Changes” feature except in Excel files where the feature is not available. |
| We do not require in depth or novel results for publication in JoVE, only representative results that demonstrate the efficacy of the protocol. However, please ensure that all claims made throughout the manuscript are supported by either results or references to published works. | The authors have made sure all results are supported with figures or references. The results presented in the manuscript are representative results another user should expect when executing the method. However, in-depth sample analysis and results would violate length requirements and are also difficult to publish due to clearance issues with the authors’ institution. |
| Add actual data along with the quantitative analysis of an actual sample (or samples) using this protocol or use a blind test sample (or samples). | The authors greatly appreciate the time and general curiosity from the reviewer on this subject. We are not sure how numbers and results for specific samples would help other readers understand and accurately execute the described method. Large tables of numeric data is generally consider bad form in scientific publications and reduces effective communication of presented ideas. Due to the nature of the analysis, the results of quantitative analysis is largely numeric and more appropriately presented as calibration curves and chromatograms, and the authors have provided chromatograms and calibration curves. The authors believe this meets the requirements and scope of the journal without providing excessive details. |
| Reproducibility is mentioned; however, the authors do not attempt to quantify this. We would be interested in both inter and intra-sample reproducibility. In addition, describe in the text what the authors feel is an adequate target precision value for this protocol. This could be done quite simply by adding a precision analysis to the data. | The authors appreciate the suggestion and the desire for additional details about the described method. We typically target a relative standard deviation of 5% for TNT and 10% for RDX with any RSD above 15% signaling a problem with method execution, instrumentation maintenance, or samples. A full precision analysis using a large sample set is beyond the scope of this manuscript as the focus is on the protocol and the methodology, not necessarily specific results and analysis. Please see the previous response for additional justification as these two comments are related. However, the first paragraph of the Discussion section has been revised to include this information about RSDs and summarize typical results we have experienced in the past. This provides a nice lead-in to the discussion on sources of variation that can affect the reproducibility. |
| Change or correct all ppb or ppm terms as appropriate to either 'by weight' or 'by volume', i.e. ppbv or ppmw | All parts-per-million and parts-per-billion units have been designated as either “by weight” or “by volume” with either a subscript “w” or “v” respectively. Additional text has been added and noted with “Track Changes” to clarify the measurements as either “by weight” or “by volume”. |
| Long Abstract Line 52: add 'the' reads for the quantitative  Line 59: … high electron affinity. However, vapor quantitation … Line 61: with a direct | All of these line edits have been added to the revised manuscript and noted using the “Track Changes” feature. |
| Introduction Line 64: remove comma Line 65: remove 'it' Line 67: remove comma  Line 73: change 'instrumentation' to 'technique' Line 74: remove comma after alternative Line 75: remove comma after GC Line 76: remove comma after 'components' Line 82: remove a.k.a and add (RDX) Line 84: add comma after 'concentration' Line 85: add comma after 'coefficients' Line 94: change to sample tubes. Unfortunately, quantitative … Line 98: add comma after (TDS-CIS) Line 102: remove remove second 'instrumentation' Line 102: after development add , but never (remove and)  Line 103: end sentence after 'vapors.' Line 107: change uppercase E T and N to lowercase Line 146: change 'ferrules on to their'…. Line 277: remove 'air' Line 311: change to 'each analyte' Line 351: change to 'RDX. However, the degradation … Line 433: change his or her to his/her Line 463: change be to is Line 507: change vapors to tubes | The majority of these line edits have been added to the revised manuscript and noted using the “Track Changes” feature. The edits recommended for Lines 463 and 507 could not be found and were not added to the revised manuscript. |
| Table of Materials Superscript the inverse microliter (-1) Add column type: DB5-MS | The inverse microliter has been superscripted for both occurrences. The column type has been added as well. Excel does not provide a “Track Changes” option to note the changes. |
| Table 2 Clarify column: Approximate Vapor Concentration - are these TNT/RDX as in the first column? | A “TNT” and “RDX” has been added to the concentrations similar to Column 1 of Table 2 to indicate the concentrations relative to the analyte. Excel does not provide a “Track Changes” option to note the changes. |
| Again: everywhere the authors have a ppm or ppb they need to specify whether this is by weight or by volume | As previously addressed, additional text has been added to clarify measurements “by weight” or “by volume” and noted with “Track Changes” within the revised manuscript. |
| The operation procedures were described too detailly, it should be breifly decipted. | While the operation procedure section is close to the page limit for the journal, the journal is focused on the methodology and not necessarily the results. Therefore, the operation procedure is expected to be more detailed and extensive than in other publications. No changes were made to the manuscript. |
| Too much narration, less analysis of the results. | Again, the journal is focused on methodology with the intention to make it easier for a potential reader to execute the method. The focus is not on analysis or results and only representative results are supposed to be included. The authors have written the manuscript based on these thoughts outlined in the guidelines for submission. No changes were made to address this comment. |
| There are neither captions on Figures nor any details relating to specific instruments/types of flow meters etc. | The authors believe the reviewer may have missed the captions and information in the tables or a technical error has occurred in the distribution of the submission to the reviewer. According to the documentation and material received by the authors during submission, all figures and tables have captions located at the end of the “Representative Results” section as required by the journal. Instrumentation details are provided in the required “Table of Equipment” and “Table of Materials” files. No changes were made by the authors to address this comment. |
| If this manuscript is intended to be a script for video component it is suggested that some sort of schematic would be helpful. | The authors are confused by this comment. There is a video component to the final publication and the “Protocol” section with highlighting service as a template for a script and storyboard to be generated by the journal after accepting the submission. The reviewer is requesting a schematic, but it is unclear of context and content the schematic should include. No changes were made by the authors to address this comment. |
| There should also be an emphasis on verification of accuracy and validation of results. | The journal emphasizes methodology and the ability to reproduce the method by readers. Results are representative of proper execution of the method or guides to include when a problem has arisen in the execution of the method. Detailed analysis of samples and results, as required by results-focused publications, is considered beyond the scope of this manuscript by the authors. No changes were made by the authors to address this comment. |

Thank you very much.

Sincerely,

Dr. Christopher Field