

Interactive comment on “Improved Methods for Signal Processing in Measurements of Elemental Mercury Vapor by Tekran® 2537A and 2537B Instruments” by Jesse L. Ambrose

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Although the reviewer recommended that the manuscript be published “as is”, I am providing responses to the reviewer’s comments here. The reviewer’s comments are shown below, followed in sequence by my responses.

Comment 1: Supports previous work identifying the need for external peak integration at low load levels. Manual identification of start and/or end peaks is impractical and could be biased. Use automated (Vaa) identification

Response: By “impractical”, I assume the reviewer is referring to the extra time needed

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to carry out manual peak identification, as opposed to automated peak identification. Automatic peak identification is certainly the most time efficient, but the performance of any automated method must be evaluated as I have done. Regarding bias, I would argue that it can be minimized with training. It is important to treat all peaks consistently so that any relative bias cancels out during calibration.

Comment 2: Uncertain why Tekran LOD’s were calculated using 2.5 liter sample volumes when most sample 5 liter volumes.

Response: The mass-based LODs I calculated are independent of sample volume. At a given Hg concentration, higher sample volumes will be required to achieve higher Hg loadings.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-134, 2017.

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