

Interactive comment on “Development and Testing of a Passive Sampler for Measurement of Gaseous Mercury” by Ingvar Wängberg et al.

Anonymous Referee #3

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Although the manuscript presents a measurement technique which is very promising for the ambient monitoring of gaseous mercury species, it lacks a robust description of the technique, details on the comparison with online measurements, a more robust analytical protocol and a deep discussion of the data.

Introduction The introduction needs more references Page 2 : TGM is not defined Passive sampler is not defined. What is the principle of this technique? What are the different passive samplers used in previous studies? Differences? Drawbacks?

Experimental section What is a Master site? “The difference between GEM and TGM is negligible at the Rao site”: please provide some evidence. Page 3 line 6: the period does not match the 5-10 days measurement runs The passive sampler must be more described. The analytical technique for measuring Hg on the matrix as well. Why is

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TGM measured? And not only GEM? Is there any testing? Calibration? There is a confusion between all the different experiments. There are 3 different experiments? What is the composition of synthetic air? How much Hg is there in it? Are the Tekran calibrated? Page 4, line 31: "field blanks": how are they obtained? Figure 2: lack of legend Figure 3: now you compare GEM vs TGM. Why is there no uncertainty on Tekran measurements?

Figure 5: This cannot be a robust comparison given the lack of data above 2 ng/m³. How can you affirm that the diffusive sampler is insensitive to wind conditions? I do not see any strong evidence. What is the influence of the temperature on long-term monitoring?

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