

Atmos. Meas. Tech. Discuss., referee comment RC1
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Comment on amt-2021-188

Anonymous Referee #2

Referee comment on "A semi-automated instrument for cellular oxidative potential evaluation (SCOPE) of water-soluble extracts of ambient particulate matter" by Sudheer Salana et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2021-188-RC1>, 2021

Salana et al. work presented an automated syringe-pump system for assessing the ROS generation from alveolar macrophage when incubated with different samples. The manuscript has discussed the setup, running procedures, LOD, precision, comparison to manual method, and the calibration of the system. I think this is a very unique study that can be inspiring to many readers on AMT. I recommend acceptance after the authors address the following minor comments.

- A batch of samples can take up to 5 hours as mentioned in the manuscript. This means the cell suspensions are left in the system for up to 5 hours. How healthy cells after sitting in an environment outside of the incubator for a couple hours? Do cell numbers change over time? The authors should add some discussions regarding this.
- line 227, fig 4 should be fig 3.
- line 231, I agree with what the authors say about express LOD in terms of standards but providing a rough liquid concentrations or doses of PM extracts can be very helpful to readers. This gives ideas of how much mass is required to have a signal above detection limit.
- line 255 "0.04 to 9.75 mM" please use mg/mL to keep consistency in units.
- Fig 6, error bars seem quite high. Please provide statistical analysis.