

Interactive comment on “Ozone measurement practice in the laboratory using Schönbein’s method” by Ignacio Arturo Ramirez-Gonzalez et al.

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Dear Editor,

First of all, thank you for your comments and constructive feedback. We have improved our manuscript according your suggestions where it is possible. Next we include specific replies to each question.

Schönbein method. On the one hand, many readers want to know the specific reason for choosing this historical method. There are many examples of experiments, ideas or elements of the history of science that can be used today for the teaching or communication of science. On the other hand, other readers want to know more about this method of measuring tropospheric ozone and, in particular, if it is possible to recover

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or get (long) measurement series using the old data that will be preserved in the notebooks of the old observatories that used this method.

The main reason for choosing the 19th-century method is because it is a traditional way to teach about the history of science and at the same time learning by doing about the environment, the atmosphere and air quality. Moreover, this methodology lets to combine teaching on chemistry and physics together (a chemical reaction is the basis to measure a chemical compound resulting from a photolytic one), meanwhile the main methodologies used nowadays are based only on physics (just by using UV light).

Also, it is cheaper method. The price of the cheapest ozone measuring device is € 600, which is an unacceptable budget for many high school laboratories around the world. However the practice here presented only costs € 200 for 1000 people.

The issue of data recovery is now included in Conclusions and reads: ‘Note the existence of previous work recovery data on which measures based on the method of Schönbein (Linville, 1980; Cartalis, 1994; Pavelin, 1999) are included. Today still exist ozone data sets that are not recovered.’

In section 4.2, software made by the authors is briefly described and the work of Ramírez-González et al. (2018) is cited. In the caption of Figure 5, the name of this software appears as “O3METER”. I am aware that the authors want to publish the detailed description of the software in another article. Perhaps this work is already accepted or published. In any case, I think you should include the name of the software in the main text and offer some additional information to the reader (a more detailed description, a website where some version of the software can be downloaded, etc.)

As mentioned in the response to reviewer 1, the manuscript has been modified and added the following: (O3Meter, which can be downloaded from Google Play or from the Github repository and installed on an Android device or on a personal computer) ’