

Interactive comment on “Influence of environmental humidity on measurements of benzene in ambient air by transportable GC-PID” by Cristina Romero-Trigueros et al.

Anonymous Referee #2

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General Comments The manuscript provides the influence of ambient humidity on benzene measurements carried out with an automated in situ GC-PID that is the instrument usually used in air quality monitoring networks. I consider that is an interesting study and therefore, I recommend the manuscript for publication in Atmospheric measurement Techniques. Some specific comments are given below to be clarified by authors before publication.

Specific Comments Pag. 2 27. What is the brand, model of the dynamic dilution system? Please include in the text. Pag. 3, line 18. Is the mixture benzene in nitrogen a SRM, if so please indicate it. Who is the supplier of the gas cylinder? Which is

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the purity? Please, indicate it in the text. Are the flow meters calibrated periodically? How? Pag. 4, line 10. Authors refer to Standard EN 14662-3:2005 in order to calculate the coefficient brh to see the influence of relative humidity but this standard is already cancelled and the equation 2 does not appear in the EN 14662-3:2015. Why do authors think that this equation has been removed from the updated Standard? If the relative humidity is so important at high concentration of benzene as demonstrated in the manuscript why it has been deleted? Table 1. if (0.01) is the standard deviation, please indicate it in the table. Table 3. A “(“ should be before $\mu\text{g}/\text{m}^3$) in C_{meas} . What is qt ? in the text are defined q_z and $q_{\text{H}_2\text{O}}$ but not qt .

On the other hand, have the authors checked the memory effect when using high concentration of benzene ($40 \mu\text{g}/\text{m}^3$)?

Technical comments

Pag. 1, line 25: revise “h0ematologic” Pag. 1, line 29. Reference properly the Standard EN in reference section. The standard number is missing. Pag. 4, line 7 and pag. 5, line 4. I think that authors should change “2005” by “2015”. Pag. 4, line 18. Section 2.2.2.1 should be 2.2.2.2 Pag. 5, line 6. Revise the sentence: Moreover, coefficient. ... In air.

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