

Dear Dr Gentner,

We thank you for your constructive comments (below in black font), which certainly improve the manuscript's clarity and intelligibility, and satisfies better the reviewer's comments. We provide a revised version that include all your recommended changes. Below, we marked our changes in red font as they appear now in the revised main manuscript and in the SI.

Comments to the Author:

Dear authors,

Thank you for your response on the comments from the 2 reviewers. Your manuscript was well-received, but there are a few comments that could be more fully addressed before accepting it for publication. Specifically there are a few comments raised by the reviewers that could be fully revised (often to just reflect your responses). My suggestions are as follows:

Report #1 Comment #1

Can you please add a sentence to the paper to reflect your response to the comment communicating that it was not feasible to collect isolated background samples at the site?

**Line 122-123: Due to no strict compliance to the night flight ban between 23:00 – 5:00 CET and further urban and industrial sources in the other wind directions, it was not feasible to collect isolated background samples.**

R#2 C#4

To address their comment and avoid confusion for future readers, perhaps you can revise "However, the majority of these compounds does not distinguish from the blank" to "However, the majority of these compounds were also observed in the field blanks and excluded from the dataset". This is more descriptive and grammatically accurate.

**Line 233-234: However, we observed the majority of these compounds at similar intensities also in the field blanks and hence excluded them from the dataset.**

R#2C#5

Please add a note the Figure S4 indicating that it was not corrected (as you note in your response) and indicate that it is prior correction for comparison (and any other relevant notes). You could perhaps also add "for comparison" to the statement about S4 in the main text.

**Main text:**

**Line 260-261: The native molecular fingerprint is displayed for comparison in Figure S4.**

**SI:**

**Figure S4. Native (not corrected) molecular fingerprints after non-target analysis (Retention time vs. MW [A], Kroll-diagram [B], Van-Krevelen-diagram [C], Kendrick mass defect vs. MW [D]) of six averaged airport-related ultrafine particle samples in the size range of 0.032-0.056  $\mu\text{m}$  (for comparison with Figure 3).**

R#2C#6

I think the reviewer is requesting you include the numerical values in the main text, along with the reference to the figures. Perhaps you could modify your addition to Line 282-283: "The analysed jet

engine lubrication oils show O/C ratios within the same range” with ([numerical range of average O/C’s]; Figures S#-#).

Line 285-286: The analysed jet engine lubrication oils show O/C ratios within the same range (0.2 – 0.4; Figures S6-10).

R#2 C#7

This is still not clear. Would the following edit be correct, or something similar? “Line 356-358: Although no tri-ortho isomer of TCP was detected, it is still WORTHWHILE to consider that isomers with only one ortho-methyl group feature possibly a higher toxicity than isomers having methyl groups only in meta- and para-position (Hanhela et al., 2005).”

Yes, this edit is correct and much clearer than previously.

Line 359-361: Although no tri-ortho isomer of TCP was detected, it is still worthwhile to consider that isomers with only one *ortho*-methyl group feature possibly a higher toxicity than isomers having methyl groups only in *meta*- and *para*-position (Hanhela et al., 2005).

Thank you

And thank you,  
Best regards,  
Alexander Vogel