

The authors thank the editor for the accurate reading of the manuscript and the suggested corrections. The manuscript was modified according to the editor's comments.

Minor comments

p. 20, l. 16: should that read '...by mixing with more hydroPHILIC species'?

Hydrophobic is replaced by hydrophilic

p. 22, l. 9: Following up on Reviewer#2's comment, it might be helpful to add 'carbon chain length' after 'molecular weight'

The sentence is modified as follows: "the lack of information on the average OA molecular weight and carbon chain length do not allow us..."

p. 23, Equation (5): Where do these numerical expressions come from? Are these fits or were they derived previously in another study? If the latter, please, add reference.

The numerical expressions correspond to the fits reported in figure 8. The paragraph was modified as follows:

" η_i is the scavenging efficiency of nitrate in size bin i . The dependency of η_i on κ varies with particle size (D_{va}), as shown in section 4.1. Thus, we estimated η_i from κ and D_{va} , based on the equations corresponding to the linear fits reported in Fig. (8b):..."

Technical comments

Throughout the manuscript: 'size-segregated' should be hyphenated

"Size segregated" replaced by "size-segregated"

p. 3, l. 14: aerosol particles

"particle" is replaced by "particles"

p. 5, l. 2: was available

"were" replaced by "was"

p. 5, l. 5: ARPA should be spelled out when it's used the first time

At page 2 line 6 "ARPA" is replaced by "Agenzia Regionale per la Protezione Ambientale (ARPA)"

p. 9, l. 2: Has rBC been defined before?

rBC is not defined before. At page 9 line 2 "rBC" is replaced by "refractory Black Carbon (rBC)".

p. 9, l. 8: Has MAAP been defined before?

"MAAP BC" is replaced by "BC measured by a Multi Angle Absorption Photometer (MAAP)"

p. 10, l. 23: concentrations

"concentration" is replaced by "concentrations"

p. 11, l. 13: out-of-fog (check also remainder of manuscript)

"out of fog" is replaced by "out-of-fog" throughout the manuscript.

p. 12, l. 7: an 8 h event

"8 h" is replaced by "8-h"

p. 13, l. 3: oxygenation of this HOA

“oxygenation for this HOA” is replaced by “oxygenation of this HOA”

p. 16, l. 8: light-scattering

“light scattering” is replaced by “light-scattering”

p. 16, l. 14: add to or reduce the pre-existing aerosol

The sentence is reworded as: “Local emissions that add to the pre-existing aerosol in concomitance with the beginning of a fog formation event could lead to the underestimation of fog scavenging”

p. 16, l. 27: during days

“in days” is replaced by “during days”

p. 16, l. 28: 'fog scavenging' should be reworded – do you mean the sum of nucleation and impaction scavenging?

Sentence is reworded as: “The difference corresponds to a removal rate of $0.3 \mu\text{g m}^{-3}\text{h}^{-1}$ ”

p. 17, l. 24: particles

“particle” is replaced by “particles”

p. 18, l. 1: no or very small...

“null or very small” is replaced by “no or very small”

p. 18, l. 7: apparently

“apparent” is replaced by “apparently”

p. 19, l. 1: hydrophilic

“hydrophylic” is replaced by “hydrophilic”

p. 19, l. 11: indicate

Sentence was corrected as: “The correlation coefficient r^2 corresponding to particles below 200 nm **D**va (0.51) indicates that hygroscopicity explained 50% of nitrate scavenging variability”

p. 20, l. 11: resulted to be internally mixed

“resulted internally mixed” is replaced by “resulted to be internally mixed”.

p. 20, l. 12: 150-700 nm (?)

150-700 nm

p. 21, l. 5: Make sure that organonitrates is separated correctly (organo-nitrates)

“organonitres” is replaced by “organo-nitrates” throughout the manuscript

p. 21, l. 8: For example, when organonitrates comprised 6%...

“organic-nitrates composed” is replaced by “organo-nitrates comprised”

p. 22, l. 17 and 18: Use Greek symbol for kappa to be consistent with previous text

Greek letter is used.

p. 24, l. 11: take up water

“to uptake” is replaced by “to take up”

p. 24, l. 20: made it impossible

“made impossible” is replaced by “made it impossible”

References:

Levin et al. – replace reference by ACP citation

Levin et al., 2013 is replaced by Levin et al., 2014 (ACP)