

ST3: Protocol for online and offline particulate matter (PM) speciation tools, with recommendations on (i) instrumentation and (ii) analysis to be implemented for organic and inorganic PM components to allow advanced source apportionment.

The linked resources for this ST include:

- 1) RI-URBANS general guideline document on non-regulated air pollutants:
D1 (D1.1) Guidelines, datasets of non-regulated pollutants incl. metadata, methods
https://riurbans.eu/wp-content/uploads/2022/10/RI-URBANS_D1_D1_1.pdf
Particularly for off-line analysis (section 4) and for on-line analysis (section 5).
- 2) On-line aerosol chemical speciation guidelines and standard operating procedures are maintained and updated by ACTRIS Central Facility on aerosol in-situ measurements:
<https://www.actris-ecac.eu/pmc-non-refractory-organics-and-inorganics.html>
And with a semi-continuous techniques:
<https://www.actris-ecac.eu/pmc-oc-ec.html>

For the online measurements, scientifically this ST3 links Chen et al. (2022a): <https://doi.org/10.1016/j.envint.2022.107325>, which summarizes an European aerosol phenomenology based on harmonized source apportionment of organic aerosol using 22 Year-long ACSM/AMS datasets. For the offline measurements the publication is in progress.