

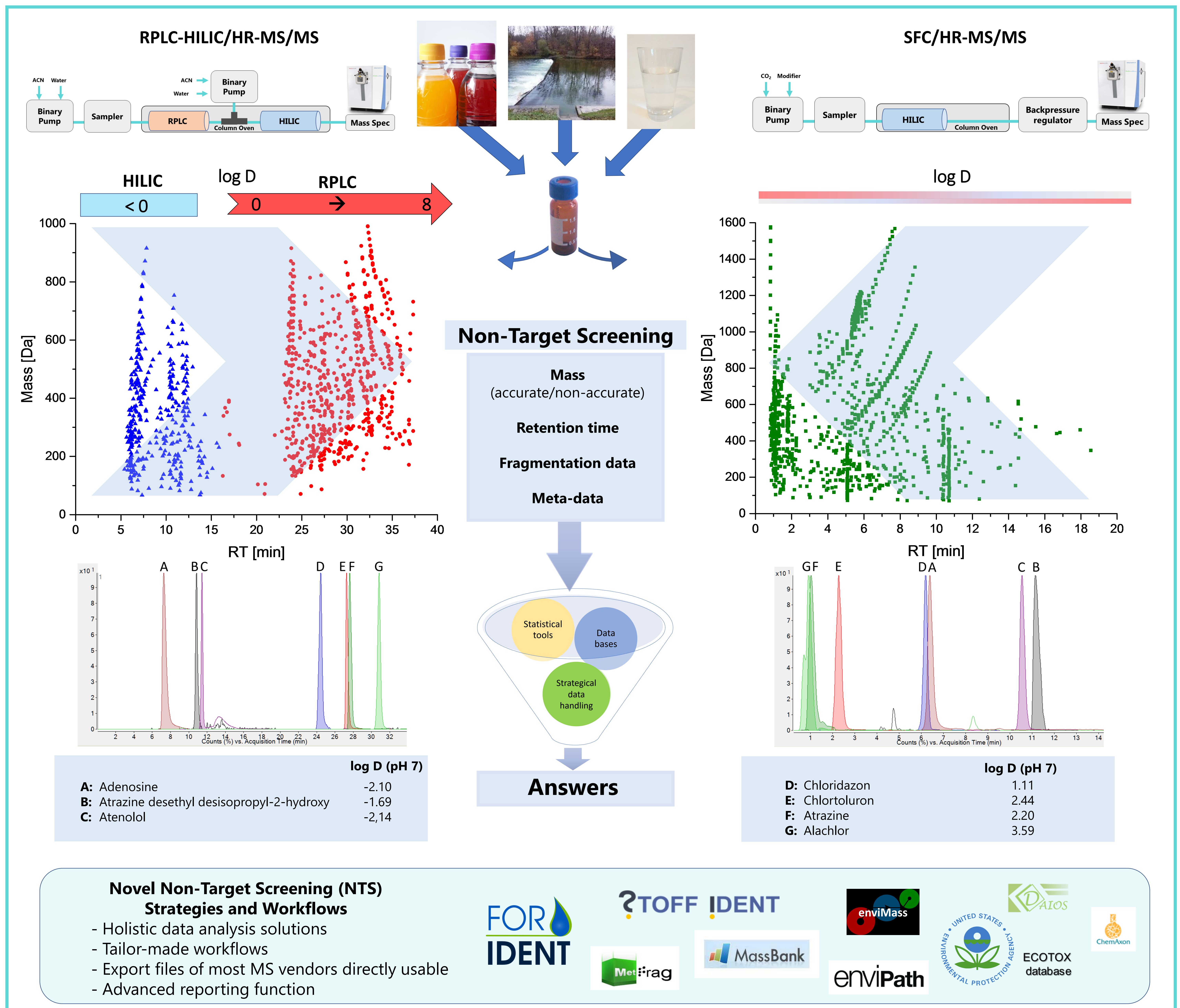
Polarity extended separation techniques coupled to mass spectrometry

- Advanced workflows for non-target screening of PMT and vPvM substances -

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Introduction - The analyses of trace compounds, including PMTs and vPvMs is currently mainly conducted using gas chromatography (GC) or reversed-phase liquid chromatography (RPLC) coupled with (tandem) mass spectrometric detection. Both techniques are well established and well suitable for the separation and detection of volatile and/or medium to non-polar non-volatile compounds. However, the separation of more polar compounds, such as polar water-solved compounds and/or their transformation products is challenging with GC or RPLC. As a consequence, alternative techniques are on market to gain a more comprehensive view on samples. In a recent publication, a serial RPLC- hydrophilic interaction liquid chromatography (RPLC-HILIC) coupling and an analytical scale supercritical fluid chromatography (SFC) have been presented as powerful separation techniques with extraordinary polarity ranges [1]. Both techniques separate non-polar to very polar compounds in one single run and offer the opportunity to widen the view on organic molecules in various matrices, such as drinking water, beverages or surface water samples.

Often there is only limited knowledge about expected molecules in samples. As a consequence, non-target screening with suspect data analysis is conducted. AFIN-TS is offering comprehensive and robust workflows for non-target screening monitoring various (non-PFAS) PMT and vPvM components in aqueous samples.



Create new paradigms in complex sample analysis using Non-Target Screening workflows !

Get **answers for YOUR analytical questions** and conduct molecule or sample characterization and/or statistical data interpretation

References:

S. Bieber, G. Greco, S. Grosse, T. Letzel: RPLC-HILIC and SFC with mass spectrometry: Polarity-extended organic molecule screening in environmental (water) samples. Analytical Chemistry 2017, 89 (15), 7907-7914 (DOI: 10.1021/acs.analchem.7b00859).

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