

PFAS

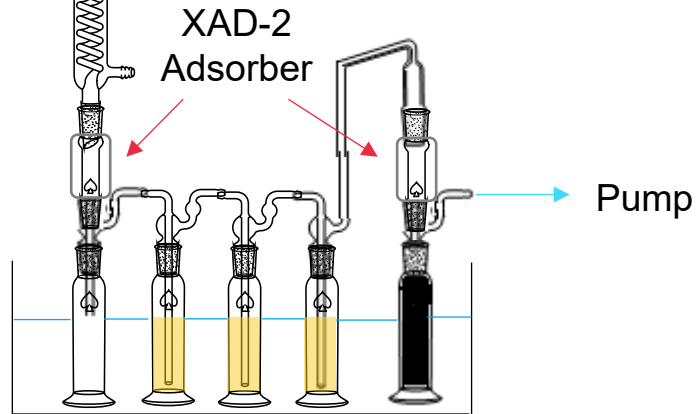
Update & geplande activiteiten

Jelle Hofman

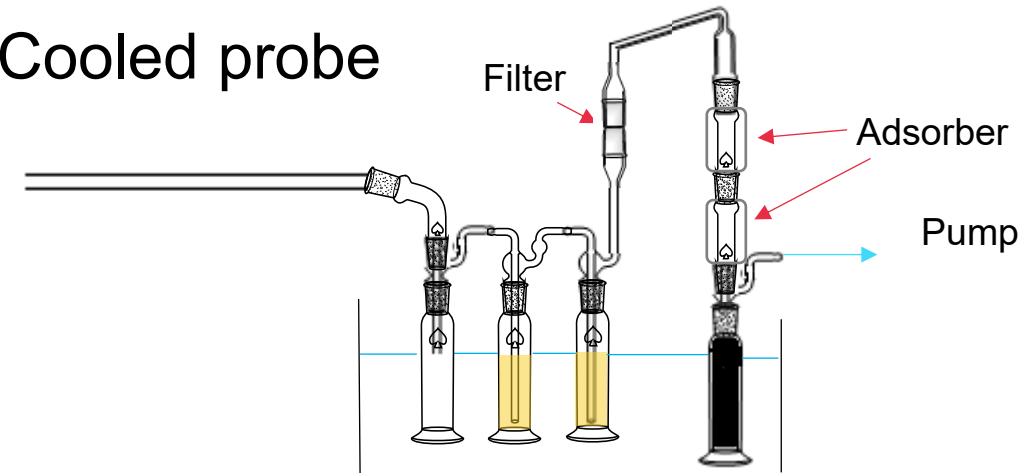
LUC/VI/003 MB2026 (3 variants)

Heated probe v1

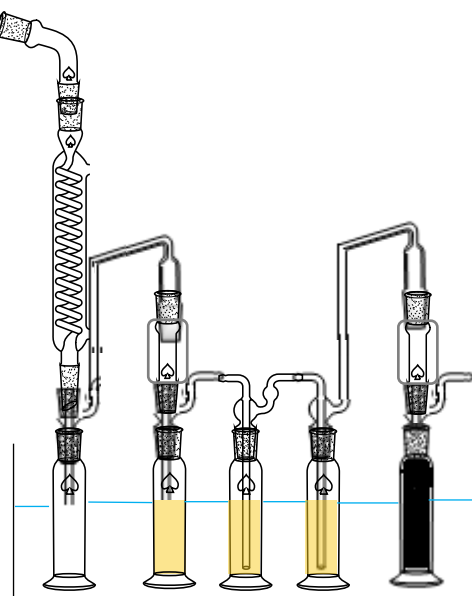
OTM-45



Cooled probe



Heated probe v2

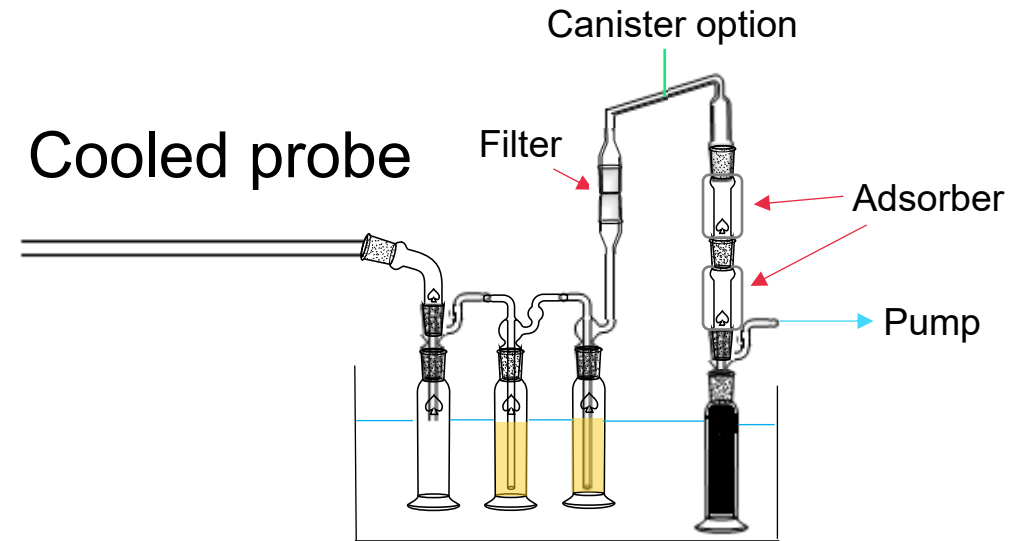


VITO experiences:

- Heated probe v1 not used by commercial labs (TAUW, SGS, Eurofins)
- XAD2 often hardest matrix (standardization/IS recovery/wetness)
- Low breakthrough water fraction: spike in 1st > 2nd > 3rd impinger → slide 3
- ILC2024 showed no breakthrough between sequential XAD2's cooled probe
- Suggestive evidence: OTM-50 compounds captured in LUC train/XAD2? → slide 4

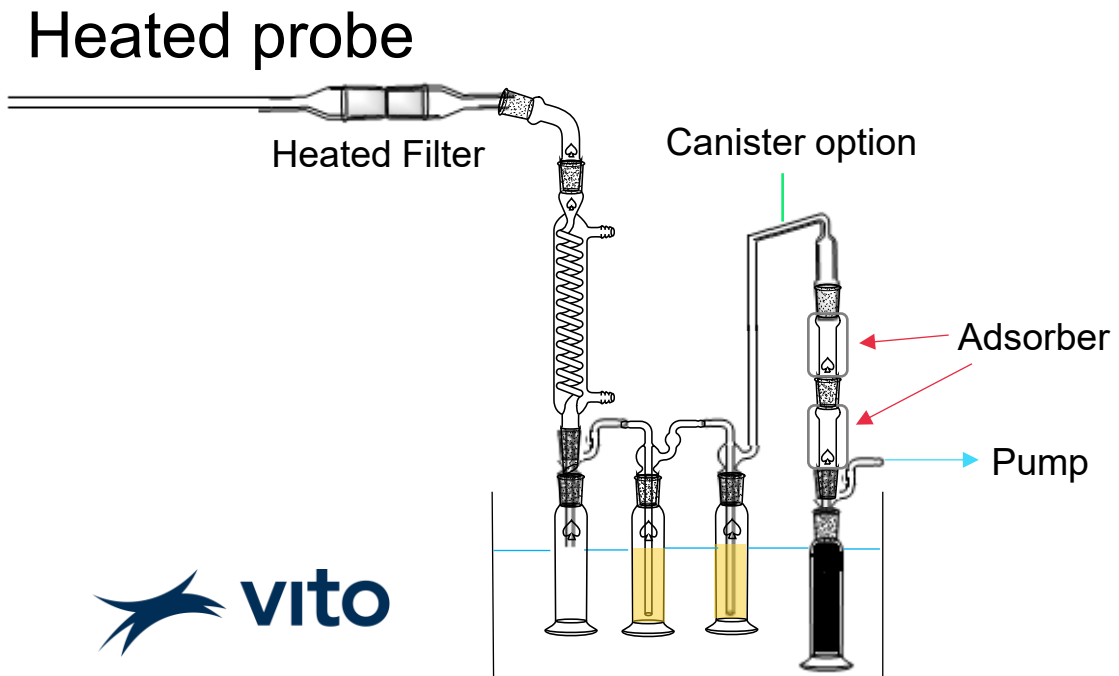
→ SOLUTION: RETHINK SAMPLING VARIANTS!

LUC/VI/003 MB2027 (2 variants)



Advantages:

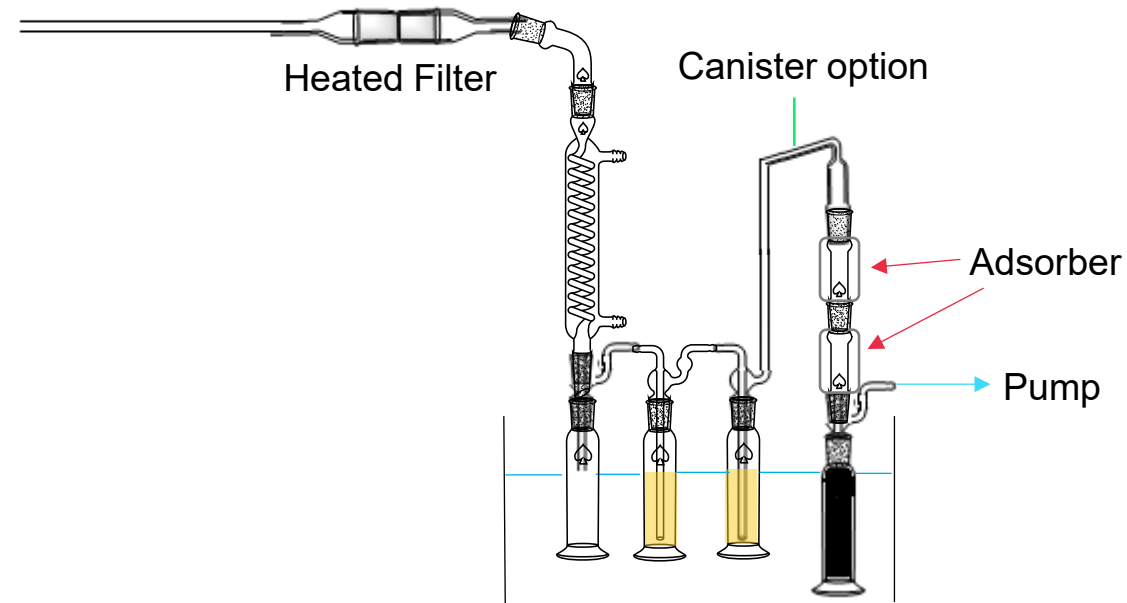
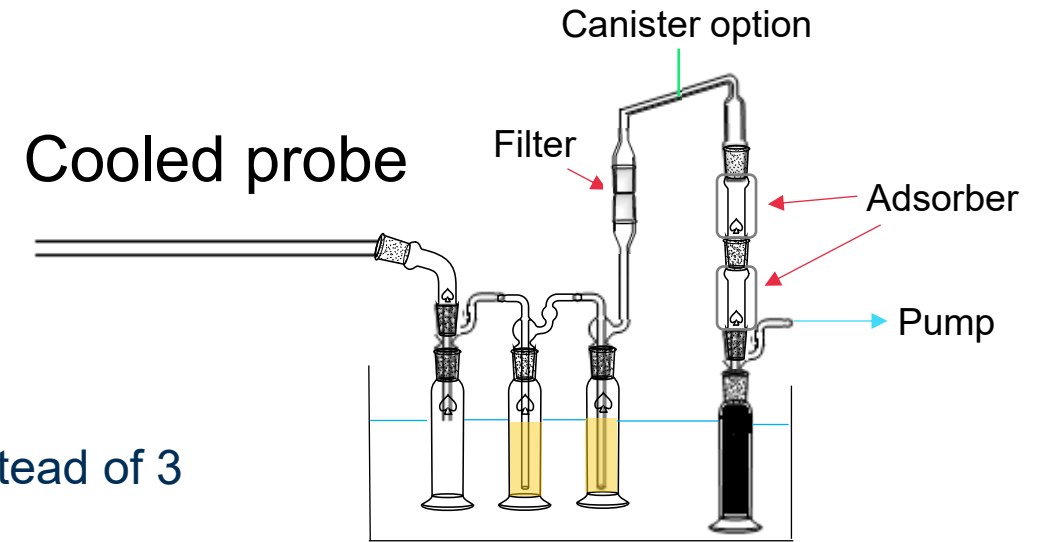
- 2 instead of 3 variants
- Similar configuration heated/cooled probe (except for filter position)
- 100 mL less water in heated probe → lower LOQ (ng/L)
- XAD2 in the back → avoid water and cleaner flue gas (less matrix)
- Canister option before XAD2's
- TBC: extraction efficiency dust in condensate of cooled probe (field ILC 2026)



PFAS

METHODS

- LUC/VI/003 **new MB2027**
 - 2 sampling train variants (heated vs cooled probe) instead of 3
 - Extension polar analytical coverage:
 - C4-C18: WAC/IV/A/025 MB2027
 - <C4: WAC/IV/A/026 MB2027
- LUC/IV/XXX
 - Neutral PFAS by means of GC-MS
 - Draft planned by...



PFAS

TEST/VALIDATION IN 2026

- LUC/VI/003
 - Validation new compounds WAC/IV/A/025 & WAC/IV/A/026: SPIKING TESTS DONE, ANALYSIS ONGOING
 - LOR from common low spiking experiments (0,2 – 2ng): DONE
 - Field validation: ILC on stack: 9-10th of June
 - XAD-2 cleaning/prep tests: PLANNED
- LUC/V/XXX
 - Finalize validation for all OTM-50 compounds
 - Prepare draft LUC

EU level

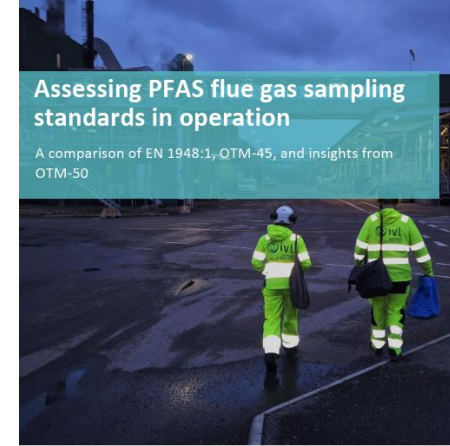


■ CEN TC264 WG48 (>2025)

- Primary focus on EN emission method (~5yr timeline)
- Design validation campaign: will be commissioned by DG ENV
- 3 subgroups: Emissions – Ambient Air & Deposition – Analytical

■ MetZeroPol: PFAS + validation TS Formaldehyde & HF (>2025)

- Review SOTA PFAS emission monitoring (done) + survey (done) + review paper (in prep)
- Stack simulator work @VITO & NPL: ongoing
- Analytical ILC
- PFAS screening on different EU stacks



■ Analytical ILC INERIS, France (2025) – IVL field test, Sweden (2025)



vito.be

LUC/VI/003

MB2027 UPDATES - <https://emis.vito.be/nl/erkende-laboratoria/lucht/compendium-luc>

ONTWERPMETHODE

Compendium voor de monsterneming, meting en analyse van lucht

Bepaling van de concentratie aan polaire per- en polyfluoralkylverbindingen (PFAS) in een geleide gasstroom