

# PASSIVE SAMPLING

**NUI** has nearly 40 years of experience with sampling and analysis of chemical contamination in gas/air. We have extensive experience in chemical surveillance of the diving atmosphere (hyperbaric atmosphere).

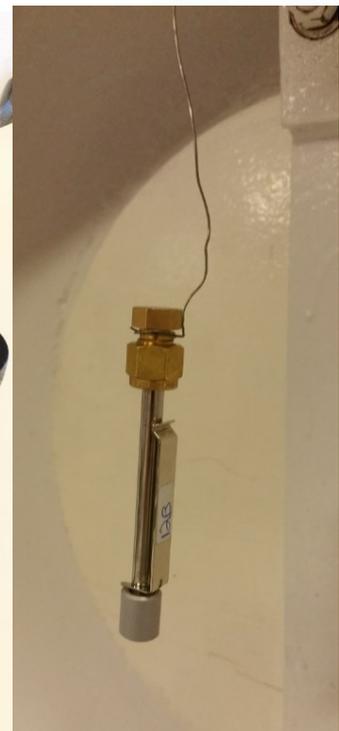
**NUI analysis laboratory** offers sampling and analysis of inorganic gases such as carbon monoxide, and volatile organic compounds (VOCs) in pressurized gas, and in workplace, indoor and ambient air. VOC includes volatile hydrocarbons like benzene, toluene, xylenes, ethylbenzene (BTEX). We also perform off-gas testing of materials and equipment.

**Passive sampling** is a cost-efficient method for sampling VOCs, and a well established technique in normal atmosphere. The method gives an average exposure values during a period of time (hours to weeks) that can be compared with existing exposure limits.

Nui has recently developed a method for **Hyperbaric passive sampling** for easier sampling during saturation diving, tunneling and mining.

**Samples** can easily be taken by personal or stationary sampling, and only requires an ATD tube with diffusion cap.

The small size of the sampling equipment, and the fact that these samples are pressureless, makes it easy to send as normal transport world wide.



Traditional **hyperbaric sampling** is often based on grab samples, which only provide a “snapshot” of the chemical contamination. Passive sampling gives a more accurate picture of the VOC exposure level.

**Analysis** of VOCs in adsorbent tubes is performed by thermal desorption and gas chromatography – mass spectrometry (ATD-GC-MS). Detection limit is 1-2 ng. The passive sampling method is based on NS-EN-ISO 16017-2:2003. Tenax TA is an often used adsorbent in addition to Carboxen 100 for volatile organic compounds.

As part of our **quality assurance** Nui lab participates in an international proficiency testing scheme arranged by LGC Standards for VOC in ambient air. Nui is ISO 9001 certified and a member of relevant standardisation organisations and committees.

Our lab is easily accessible in Gravdal, Bergen.

For **further information** or questions, please contact:

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