µPGC ODO

ATEX-certified µPGC ODO analyzer for THT and TBM compliant with ISO/TS 16922:2022

Continuous monitoring of THT and TBM to ensure the safety and compliance of natural gas and biomethane networks

SRA INSTRUMENTS
ANALYTICAL SOLUTIONS

CONTEXT, CHALLENGES, SOLUTION

Gas Odorization: Choose Next-Generation Analysis

REGULATORY AND OPERATIONAL CONTEXT

Natural gas, composed primarily of methane, is odorless at the source and requires the addition of specific compounds (THT and TBM) to enable the rapid detection of any leaks. The **ISO/TS 16922:2022** standard defines the criteria and thresholds for odorization, imposing rigorous monitoring requirements. The new generation of analyzers based on MicroGC technology offers automated, frequent, and reliable solutions that comply with regulatory standards and guarantee maximum safety for operators and consumers.

*µ*PGC ODO: THE NEXT-GENERATION MICRO GASCHROMATOGRAPH ANALYZER

The ***µ*PGC ODO** is the most advanced and safest solution for gas odor control. Certified ATEX II 2G Ex db IIB+H2 T5 Gb (operating temperature -40 °C to +60 °C) and compliant with European Directives 2014/34/EU, 2014/30/EU, and 2014/35/EU, as well as the requirements of **ISO/TS 16922:2022**.

Its modular design ensures rapid maintenance interventions and reduced operating costs. Data acquisition and processing are carried out via **PROstation** (from **Agilent Technologies**), a **web browser software**: no software installation is required on a PC; a tablet, smartphone, or any network-connected device is sufficient to access all functions. Results, provided in near real-time, are transmitted via Modbus, easily integrating with existing control systems.

All electronics and the processing unit are integrated onto the motherboard inside the instrument housing, eliminating the need for an external unit or remote control unit.

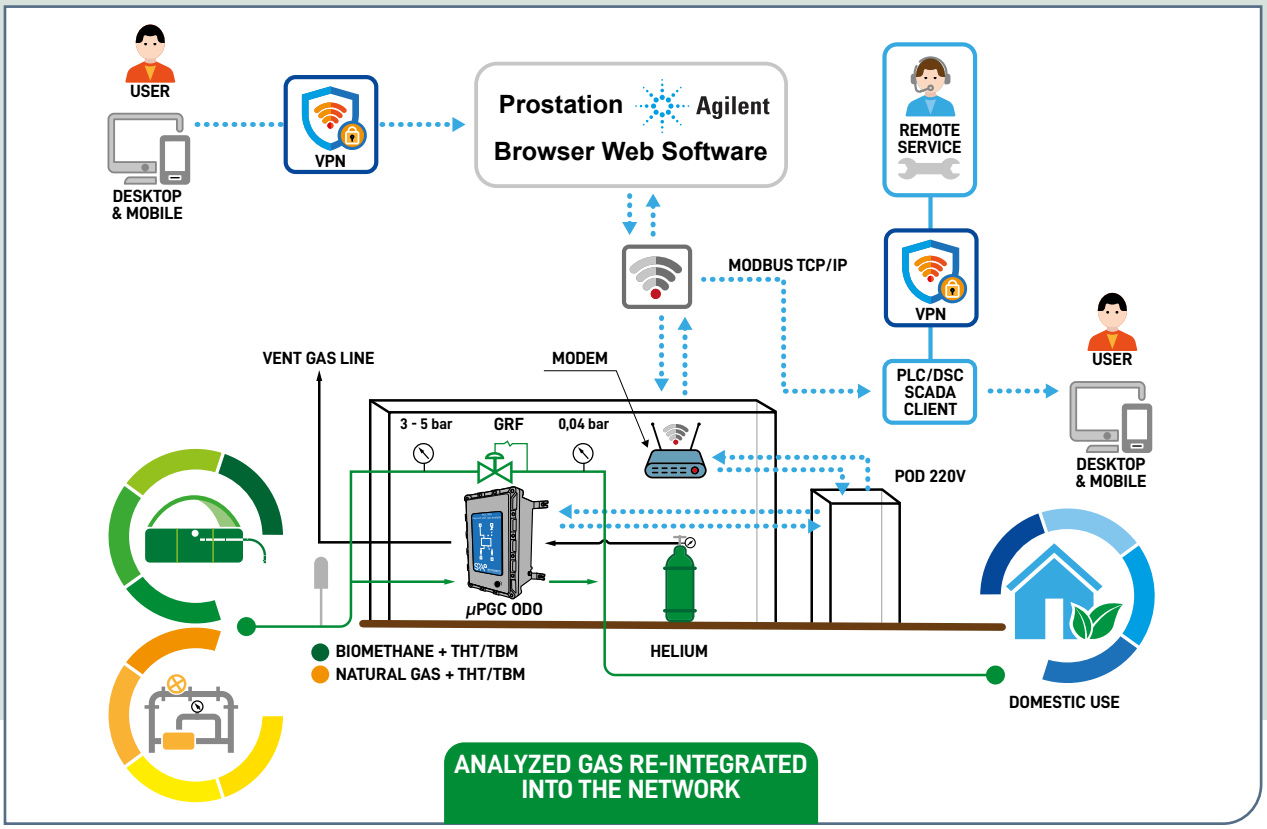
The compact design simplifies installation, increases reliability, and makes the ***µ*PGC ODO** the ideal choice for continuous, state-of-the-art gas odor monitoring.

THE *µ*PGC ODO SOLUTION

- **Simultaneous analysis of THT & TBM.**
- **Very low quantification limits:**
  1,8 mg/m^3 for THT.
- **Speed:**
  60 sec.
- **Reduced operating costs:**
  Minimal helium consumption.
- **ATEX certification:**
  II 2G Ex db IIB+H2 T5 Gb (Zone 1).
- **Simplified on-site maintenance:**
  Plug & Play modules.

TECHNICAL AND SOFTWARE DESCRIPTION

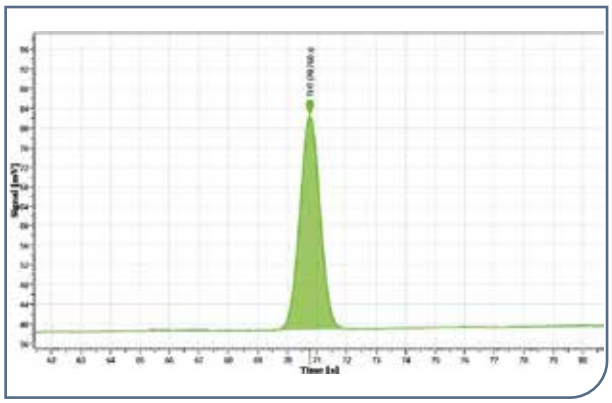
PROstation is the software integrated into the instrument's motherboard, designed to digitize the measurement of THT and TBM in natural gas. It operates 24/7, without external components, significantly simplifying installation and management.

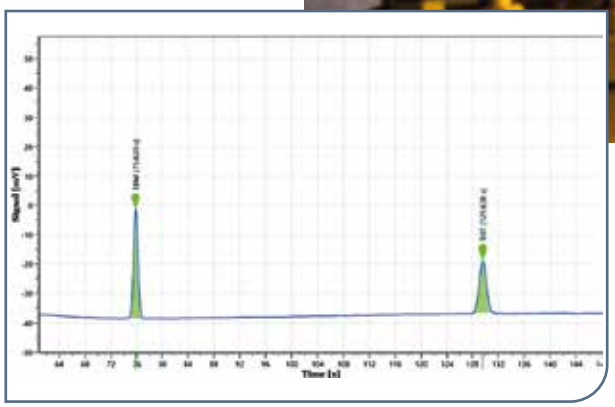


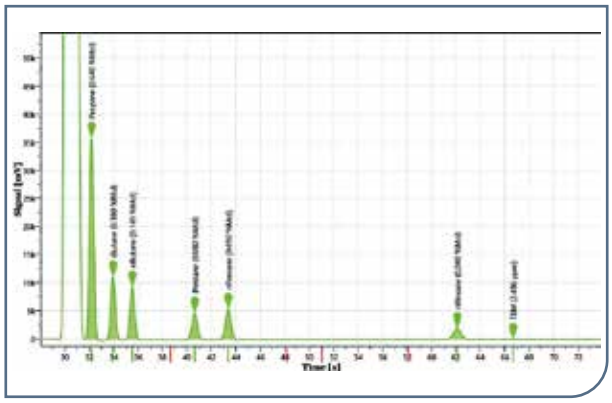
MAIN FEATURES

- **Integrated Web Server**
  Immediate access from any device (PC, tablet, smartphone). LAN connection for unrestricted remote monitoring.
- **Autonomous Analysis Management**
  Sequence programming, alarm management, results reading, and instrument start/stop without local intervention. Qualitative and quantitative calibration with normalized results and indication of the unnormalized total.
- **Advanced Data Visualization**
  Autonomous analysis management, chromatogram visualization, and integration of peaks and graphical trends of concentrations in a single software environment. Reporting functions for traceability and process optimization.
- **Industrial compatibility**
  Protocols (Modbus TCP/serial, 4-20 mA, FTP, etc.) for easy integration with programmable logic controllers (PLCs) or control systems.
- **24/7 operation**
  The analyzer is designed for continuous operation, with near real-time data transmission, ensuring high safety and maximum operational efficiency.
- **PROstation web browser software**
  The evolution of process analysis instrument management: intuitive, without superfluous components, and designed to guarantee accuracy, reliability, and reduced management costs.

ANALYTICAL DETAILS AND CHROMATOGRAMS







Analytical Capabilities

- **THT Measurement Range**
  0-300 mg/m³ (LOQ: 1,80 mg/m³).
- **TBM Measurement Range**
  0-300 mg/m³ (LOQ: 1,90 mg/m³).
- **THT Repeatability**
  < 2% relative standard deviation (RSD) at 15 mg/m³.
- **TBM Repeatability**
  < 2% relative standard deviation (RSD) at 9,3 mg/m³.

Analysis Speed

- TBM and THT: 60 seconds.

Focus on Sustainability

- Carrier Gas Consumption: < 1300 L/year.
- The sample is reinjected into the network, eliminating atmospheric emissions.
- Suitable for use in environments from -40 °C to +60 °C.

APPLICATIONS

This solution enables online and automated analysis of odorant concentration (THT or TBM) in various areas of the gas distribution network:

- Control and measurement booths, before and after odorization.
- For end-of-network monitoring.
- Odorization measurement points, where maximum accuracy is required.

TECHNICAL SPECIFICATIONS

Parameters	Value / Description
Application	Online analysis of THT and/or TBM content in natural gas
PGC Inputs/Outputs	2 x RS485, 1 x RS232, 1 x LAN (MODBUS TCP/IP)
Supported Protocols	MODBUS RTU, TCP/IP or RS485
ATEX Certifications	II 2G Ex db IIB+H2 T5 Gb (Zone 1)
Carrier gas	Helium (He) or hydrogen (H_2)
Carrier gas consumption	< 1300 L/year
Carrier gas pressure	5,5 ± 0,2 bar rel.
Carrier gas purity	Class 5,5 minimum (≥ 99,9995% purity)
Carrier gas connections	1/8" Swagelok
Connections and vent	1/8" Swagelok
Sample connections	1/8" Swagelok
Sample gas conditions	P_{min}: 0,2 bar rel.; P_{max}: 1 bar rel.
Compounds analyzed	THT, TBM
THT repeatability	< 2% RSD @ 15 mg/m³
TBM repeatability	< 2% RSD @ 9,3 mg/m³
Accuracy	± 0,7 mg/m³ (THT), ± 0,5 mg/m³ (TBM)
LOQ	~ 1,80 mg/m³ (THT), ~ 1,9 mg/m³ (TBM)
Operating temperature	-40 °C / +60 °C
Dimensions / Weight	42,5 × 25,5 × 22,3 cm / ~20 Kg
Software	PROstation Web (no external PC required)
Power supply	100-240 VAC 50-60 Hz 40 W max
Power consumption during operation	26 W
Analysis time	60 sec.

CONCLUSIONS

- The **μPGC ODO** is the ideal solution for those who demand uncompromising precision, safety, and compliance in gas odor monitoring of THT and TBM, thus reducing costs and the risk of non-compliance.

Contact us fo a demonstration or a personalized quote!

SRA INSTRUMENTS
ANALYTICAL SOLUTIONS

Agilent Technologies
Premier Solution Partner

*This information is subject to change without notice.

EN 01_2026

www.srainstruments.com

SRA Instruments SpA: Via alla Castellana 3 - 20063 Cernusco S/N (MI) Italy - Ph. +39 02 9214 3258 - info@srainstruments.com
SRA Instruments SaS: 210 rue des Sources - 69280 Marcy l'étoile France - Ph. +33 4.78.44.29.47- info@sra-instruments.com