

Tekran OrbiTek-80 Online Natural Gas Hg Monitor

Rev. 101420

Key Features

- Class 1 Div 2 cabinet for use in hazardous environments
- ASTM-6350 and ISO-6978 method compliant
- Dual-bed gold sample trap design avoids analytical gold cartridge exposure to complex sample gas
- Multiple automated QA routines validate method performance
- Range of 1 **ng/m³** to 2 **mg/m³**
- Network enabled for remote operation
- Cabinet integration and design by Tekran Partner:

Orbital Gas Solutions 



Tekran OrbiTek-80 (Door Closed)

Electronics Platform and Detector Features

- Instrument touch screen interface does not require PC for operation
- Local data storage, front panel USB port, and remote access for data retrieval
- Additional functionality via optional s/w plugins (i.e. valve multiplexer)
- Digital lamp and detector electronics w/ remote control and display

Flow Path – Calibration – Quality Assurance Features

- Low dead-volume valve assemblies with inert PEEK surfaces
- Integrated sample and breakthrough trap assessment with option for single or combined heating to provide measurement and QA assessment options
- Constant power heater control insures consistent temperature over heater life
- Unique design isolates analytical cartridge from complex natural gas matrix; the cartridge is only exposed to carrier gas for optimal performance and robustness
- Integrated permeation source allows assessment of trapping efficiency, matrix effects, and routine automated calibration

Physical Layout

- Instrument and enclosure design allows free-flowing inert purge gas exchange throughout instrument to improve overall safety rating
- Simple access to serviceable components like cuvette and gold cartridges



Tekran OrbiTek-80 (Door Open)



Tekran OrbiTek-80 (Instrument Down)

Specifications (Beta)

- Analyte: Total gaseous mercury in natural gas
- Principle: Dual-bed gold pre-concentration with CVAFS detection.
- Range: 1.0 **ng/m³** to 2.0 **mg/m³**
- Sampling Cycle: 2.0 – 60 min
- Sampling: Alternating sample collection and analysis cycles
- Data Outputs: Network (1), USB Device (1), USB Host (3), RS-485 (2), RS-232 (1), Analog Chart (2)
- Sample Flow: 0.1 - 0.5 L/min with 5 psi (max) inlet pressure
- Flow Totalization: Precision mass flow controller (MFC)
- Carrier Gas: Argon or Nitrogen
- Consumption: ~125 L/day (full size tank lasts 2 to 3 months)
- Carrier Setpoint: Precision mass flow controller provides dynamic control of carrier flow during each desorption cycle. MFC delivers superior flow stability and accuracy.
- Calibration: Automatic **multi-point** calibration using internal permeation source. Manual injection port also provided
- Physical: Self-contained with maximum internal and external case venting. 19" rack mountable (4U height)