

Modular Total and Methyl Mercury Analysis

Rev. 040115

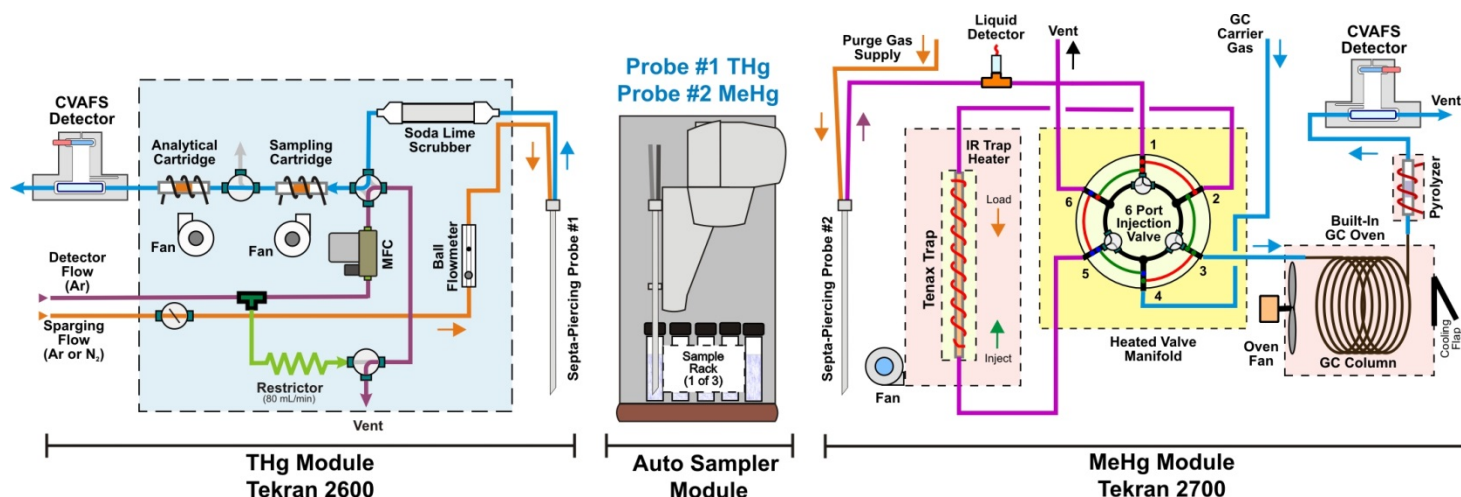


Tekran Instrument Corporation offers the discerning Lab Manager and Research Scientist the most advanced and well-designed **Modular Analysis System**. The Tekran Modular Analysis System has been designed to provide the flexibility to analyze both Total Mercury (THg, **EPA 1631**) and Methylmercury (MeHg, **EPA 1630**) with a single modular system. The unique Tekran Modular Analysis System allows quick conversion between the two operating modes, saving the user valuable time. Because the sample flow paths are 100% independent, there is never a risk of cross contamination between operational modes. Each module is controlled by Tekran's easy-to-use software, putting unlimited control and adaptability at the fingertips of the analyst.

Tekran Modular Analysis System Design Benefits

- Each flow path is 100% isolated - no shared components. Prevents method cross contamination - a THg contamination event will have zero impact on MeHg results.
- THg and MeHg modules are pre-optimized. The Tekran Modular Analysis System does not require sensitivity adjustments when switching between methods.
- Easy switching between operating modes – remove one autosampler probe, insert other probe, and toggle autosampler control. The entire conversion is less than one minute!
- Tekran's user-friendly software puts complete control of all method events at the user's fingertips. Includes built in system diagnostics and remote support capability.
- The system is very compact, requiring only 94 cm (37 in) of linear bench space. With simplicity in mind, the Tekran system only requires connection of 3 modules.
- Very easy and low-cost to split the system into two fully independent analytical systems when higher throughput is needed. The only requirement is a second autosampler.
- If one analyzer requires maintenance or repair, the laboratory can still analyze samples with the other analyzer. For modular systems with only one detector, the analysis of all MeHg and THg samples stops when the detector is down.

Tekran Modular Analysis System Flow Diagram



Tekran 2700 Auto-Analyzer Features

- Highly sensitive, ultra-stable CVAFS Hg detector: *MDL of 0.002 ng/L*
- Capillary GC column for superior separation and quantification.
- Programmable GC oven temperature control
 - Programmable for either isothermal or temperature ramp chromatography
 - Oven will accept either capillary GC column or packed GC columns
- IR sample trap heating with active cooling (Tenax OR Carbotrap, customer choice)
- Direct vial purge for simplified operation
 - Dramatically reduces carry-over potential and maintain system cleanliness
 - No risk of liquid getting into sample trapping column or GC.
- Liquid detector shuts down system in case of malfunction
- Heated valve manifold prevents potential losses
- Capable of interfacing to ICP/MS to yield isotopic ratios for methyl mercury
- Easily adaptable to special applications
 - Manal trap analysis (MeHg, DMHg, etc.)
 - Large volume analysis (up to 250 mL)
 - Post analysis species-specific capture (Isolation of Hg⁰, MeHg, Hg^{II})
- Small foot print (51cm X 35cm X 52cm, L:W:H)

Tekran 2600 Auto-Analyzer Features

- Highly sensitive, ultra-stable CVAFS Hg detector: *MDL of 0.02 ng/L*
- Superior design with unsurpassed analytical performance
- Short set up time
- Robust & simple to maintain
- Superior user control
- Adaptable to multiple methods
- Minimal sample carryover with auto-flush function
- Automatic shut off
- Small foot print (23cm X 30cm X 43cm, L:W:H)

Due to continuing development, all specifications are subject to change.