

# Tekran 2600 IO-5 Sampling and Analysis

Rev. 102215

Tekran<sup>®</sup> provides a suite of products for the measurement of ambient air and similar non-combustible gases in accordance with the US EPA Method IO-5 recommendations.

The sample gas is then passed through gold-coated quartz cartridges while the sample volume is totalized using a conventional dry gas meter. The mercury in the gas amalgamates onto the surface of the gold cartridges during sampling.

The cartridges are removed for subsequent analysis. A rugged and compact atomic fluorescence system contains a cartridge desorber, fixed analytical trap, an AF detector and the control electronics. The entire system is controlled by a PC computer through a single serial COM port. Calibration is done via vapor injections using a temperature controlled calibration source.

## Tekran Quartz-Gold Sampling Trap

- Custom made quartz substrate for high surface area, low back pressure, and reproducibility
- New, precisely controlled, optimized, high-purity plasma deposition process
- Blank and batch testing to meet strict recovery and carryover criteria

## Model 2030 - Heated Cartridge Sampler

- Warms cartridges during sampling to eliminate condensation
- Three cartridge sleeves in heated zone allow duplicate and even triplicate simultaneous sample trains to be exposed
- Heated zone is long enough to allow two gold cartridges to be placed in series within each sleeve

## Model 2505 - Calibration Unit

- Suitable for field or laboratory use
- Thermo electric temperature controller: no water bath required
- Operates from 12 VDC or line power
- Precision temperature measurement with digital display. Resolution: 0.001 °C

**Tekran Gold-Quartz Sampling Trap**



**Model 2030 Heated Cartridge Sampler**

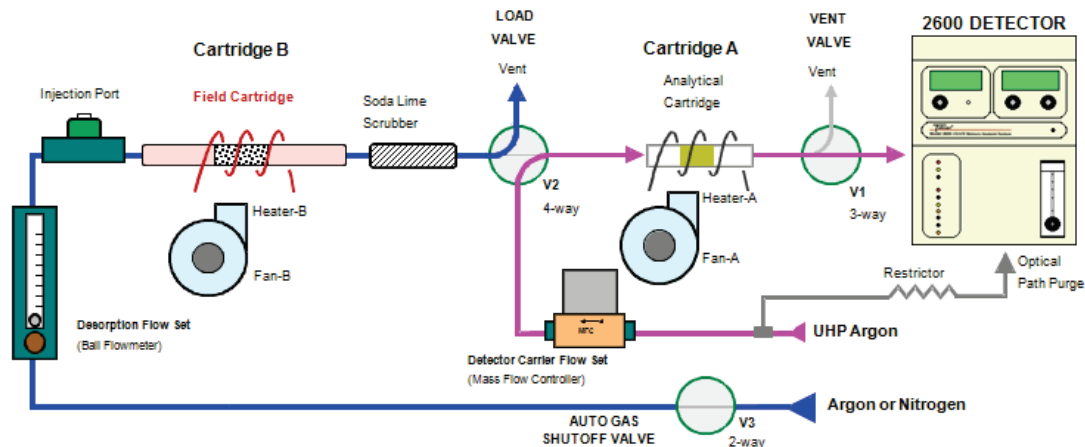


**Model 2505 Calibration Unit**



**Model 2600 AF Mercury Analyzer**

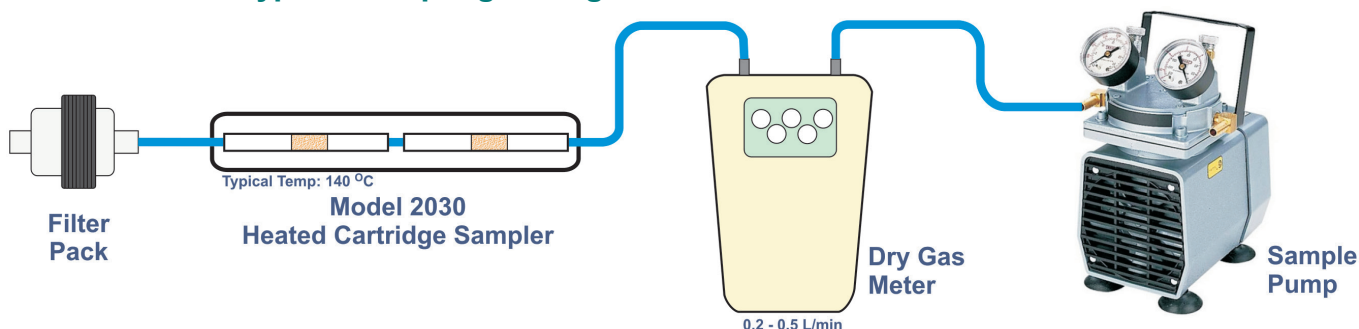
## Model 2600-NG Analytical Flow Diagram



## Model 2600-NG System Features

- Suitable for field or laboratory use
- Desorbs industry standard 1/4" OD x 5" to 6" long friction fit cartridges eg: Tekran Gold-Quartz Trap
- Ultra-sensitive Atomic Fluorescence (AF) detector: Typical MDL < 1.0 ng/m<sup>3</sup>
- Dual stage gold pre-concentrator & thermal desorber:
  - ◆ Continuously variable heaters allow ramped heating
  - ◆ Internal cooling fans provide faster cycle time
  - ◆ Teflon Load & Vent solenoids reduce sample path contamination
- All Teflon & glass sample train
- Precision mass flow controller for superior stability
- Auto carrier shutoff to conserve carrier gas
- 24 bit A/D converter provides wide dynamic range
- Automated desorption cycle
- Calibration using any saturated vapor injection source eg: Tekran Model 2505
- Controlled via newly updated Tek-MDS 2.5 software by any Windows™ based PC through single serial port
  - ◆ The new application is faster, more reliable and offers a wide range of new capabilities including software access to hardware settings and feedback for trouble shooting and full control
  - ◆ Calibration and final results are calculated directly in ng/m<sup>3</sup>
  - ◆ Fully programmable desorption cycle parameters to tailor system for any special application
  - ◆ Notebook PC allows portable operation

## Model 2600-NG Typical Sampling Configuration



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