

Unique Features of the Tekran Model 2537B

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The Tekran Model 2537B provides precision mercury analysis, operates remotely with an analysis rate as low as 2.5 minutes, and opens up a vast range of applications. Since its introduction, the 2537 analyzer series has become a standard tool for research institutions, industries, and governments throughout the world. When combined with the Tekran Models 1130 and 1135, the Tekran 2537 is the only detector capable of automated, continuous atmospheric mercury speciation as low as 2 pg/m^3 . Note that this instrument is covered under several US and international patents. (US patents no: 5,597,535 and 5,660,795)



Unique Capabilities – Model 2537B

- 1) Continuous monitoring of inlet stream.
- 2) Accurate quantitation allows true background determination in ambient air at levels less than 1 ng/m^3 .
- 3) Automatic self-calibration using internal permeation source.
- 4) Ability to operate unattended for weeks at a time.
- 5) Accessories allow measurement of mercury fluxes and performance of standard additions for quality control purposes.
- 6) Expandability to measure reactive gaseous mercury and particulate bound mercury using Model 1130 & Model 1135 front end samplers. (Separately patented in US, Canada and Europe.)

Specifications – Model 2537B

Analyte:	TGM (Total Gaseous Mercury)
Principle:	Gold preconcentration. Atomic Fluorescence detection.
Sensitivity:	< 0.1 ng/m^3 (5 min samples)
Sampling Cycle:	2.5 – 60 min
Sampling:	Continuous (no gaps in data stream)
Outputs:	Serial RS-232 Two 0-5 V analog
Sample Flow Rate:	0.5 – 1.5 l/min
Flow Totalization:	Precision Mass Flowmeter (MFM)
Pump:	Internal. Variable speed. (Controlled by MFM)
Carrier gas:	Argon
Consumption:	Full size (“T”) tank (9200 liter capacity), typically lasts 2 to 3 months
Carrier setpoint:	Precision Mass flow controller <ul style="list-style-type: none">• Carrier flow is set to one of 3 settings during each desorption cycle. Minimizes argon use during idle periods.• MFC provides superior stability and accuracy.
Calibration:	Automatic using internal permeation source (traceable to US NIST standard) Manual injection port also provided
Physical:	Self contained. 19” rack mountable (8.75” height)

Accessories

These accessories increase the range of applications for which the Model 2537B can be used.

Model 1130 & Model 1135

Instrument expands the capability of Model 2537B to allow automated monitoring of gaseous oxidized mercury (GOM) and Particulate Bound Mercury (HgP). This is the only automated method for determining these parameters and is covered by US and international patents and patents pending. The system provides true *simultaneous* determination of elemental mercury and the above two parameters.

Detection Limits: ~ 2 pg/m³ (2 hour samples)



Model 1120 Standard Addition Unit



Device allows addition of known amounts of mercury to the sample air stream to verify analyzer performance. The Matrix Spiking is a quality assurance process to ensure accuracy without analytical bias. The user can program spiking frequency, spiked amount, spike timing as well as manually trigger spiking events.

Model 1115 Multi-Port Sampler

Multiplexed valve arrays provide the Model 2537B with the ability to sequentially monitor one of four, six or eight unique sampling points. This device is useful when performing exposure studies or evaluating air concentrations at multiple nearby locations.



Model 1110 Two Port Sampler



Flux chamber analysis requires measurement of mercury concentrations at the inlet and outlet of the chamber. During analysis, flow through the system is kept constant regardless of which port is sampled by the instrument. The 1110 Two Port Sampler allows monitoring of mercury fluxes at two sample points and many other custom applications.

Model 1100 Zero Air Generator

Convenient source to provide the mercury free air required during calibrations. (The analyzer includes a zero air pressure regulator and Hg scrubber so any pressurized source of instrument quality air may be used.)



Availability

Tekran is the sole manufacturer of Tekran[®] equipment. We are the sole supplier of this instrumentation in the US and Canada. We also sell directly to end users in countries that do not have a local representative. Representatives are available in other countries. (See www.tekran.com for a current list of international representatives.)