Air Testing Services

AGAT Laboratories

Air Quality Monitoring

AGAT Laboratories has an over 40 year history of providing a full range of air services to industries and the government making us a recognized leader throughout Canada. We assist clients in achieving regulatory compliance by evaluating the effectiveness of their air monitoring management systems and providing accurate assessments for their environmental impact studies. We specialize in source emissions testing, ambient air monitoring, meteorological monitoring, passive air monitoring and data acquisition.

Source Emissions Testing

Relative Accuracy Test Audits

Our mobile Continuous Emissions Monitoring System (CEMS) extracts continuous gas samples from the source through dilution or a straight extractive system. The CEMS provides real-time measuring and trending for the continuous monitoring of emissions from processing and industrial stacks.

Source Testing Services

Our field personnel take on-site samples of emission source gas using iso-kinetic or proportional rate methods. The collected gasses are passed through filter media, sorbent traps and various chemical reagents and are then quantified in the laboratory using reference test methods.

Applications

- pollution control
- cylinder gas audit (CGA)
- performance testing
- routine compliance testing
- system optimization
- manual stack surveys
- continuous emissions monitoring systems (CEMS)

Capabilities	
NO_x	Metals
H_2S	CO_2
O_2	TRS
THC	PCBs
SO_2	Mercury
VOC	PM_{10} / $PM_{2.5}$
NH_3	Dioxins and Furan
CO	PAH
Total Particulate Matter	Flow Rate

Ambient Air Monitoring

Continuous Air Monitoring Stations

AGAT Laboratories has a long history of providing a full range of air services to industries and the government, making us a recognized authority on air quality monitoring analytical services throughout Canada. Our services assist clients in achieving regulatory compliance, evaluating the effectiveness of their air monitoring management systems and giving them accurate assessments for their environmental impact studies.

Our ambient air monitoring division specializes in providing services to:

- continuous air monitoring stations
- meteorological monitoring
- data acquisition
- regulatory compliance reporting (monthly and annual, including XML files)

Applications

- industrial compliance monitoring
- industrial baseline studies
- non-point source testing
- community exposure assessments

Ambient Air Monitoring Capabilities			
SO_2	NO_2	CO_2	$PM_{2.5}$ + PM_{10}
H_2S	NH_3	TSP	Fine Particulates
TRS	O_3	THC	BTEX
NO_x	CO	NMHC	Meteorological Indicators

Passive Monitoring

Passive Air Quality Sampler (PAQS)

AGAT Laboratories' Passive Monitoring lab is accredited under ISO 17025 by the Standards Council of Canada (SCC) and our PAQS have been field-validated to meet the requirements of regulatory programs. Each sampler contains a chemically treated filter that absorbs a targeted pollutant of interest. The PAQS are placed inside a protective rain shelter in the field for a set time frame. After filters are exposed to the environment, they are analyzed in our Clean Air Laboratory to measure pollution concentrations collected for the duration of exposure, expressed as a time-weighted average.

PAQS are a cost-effective solution to obtain viable data for baseline and regulatory pollutant measurements. The system is portable and does not require electricity, data loggers or pumps to operate.

Applications	Capabilities
Measurements required for large geographical areas for spatial variation of pollutant levels	O_3
	SO_2
	H_2S
Establish baseline trends prior to startup	NO_2
	NH_3
Obtain data over the long-term that show location-specific trends	VOCs
	BTEX

Meteorological Monitoring

We provide complementary and stand-alone meteorological monitoring solutions that can be solar-powered, complete with data logging and real-time polling capabilities.

Applications	Capabilities
Air quality dispersion modeling	Wind speed and direction
	Ambient temperature
Air advisories	Relative humidity
Supplemental data to support alternative air monitoring programs	Barometric pressure
	Precipitation (rain and snow)
	Solar radiation

Integrative Monitoring

We offer various integrative sampling programs including SUMMA canisters and filter-based collection drawing air through filters and absorbants.

Integrative Monitoring Applications	
Odour complaints	Chemical warfare agents
Industrial hygiene	Emissions studies
Environmental Monitoring	

These samples are collected using pollutant-specific techniques that align with US EPA methods such as:

Sampler	Capabilities
Quartz and Teflon Filters	$PM_{2.5}$, PM_{10}, and TSP
Silonite Canisters and Tedlar Bags	US EPA-TO VOCs
Sep-Pak Cartridges and Gastec Tubes	Formaldehyde and Phenol
PUF Tubes	High Volume Sampling for PCBs PAHs

WebAIR is a secure website for accessing real-time ambient air monitoring and meteorological data. Features include printing daily reports of hourly records and trending of daily instrument verifications. Internally we perform daily data validation using this tool, which is enhanced by integrated site-specific alarming of exceedances or indicators of equipment malfunction.

webair.agatlabs.com

Greenhouse Gas Emissions Monitoring

Multi Sector Air Pollutants Regulation (MSAPR)

Base Level Industrial Emissions Regulations (BLIERS) were put in force by the Canadian Federal Government in June, 2016.

AGAT Laboratories offers a multitude of services that can assist in the determination of the pollution intensity limits. We have qualified and trained technicians across Western Canada that are able to perform the required compliance tests, emission checks and Relative Accuracy Test Audits (RATA's) that are necessary to meet the new regulation requirements.

Fugitive Emissions Services

Using our state-of-the art FLIR cameras and QL320 Optical Gas Imaging device, we can assist preventative maintenance efforts and detect leaks in real-time in all manner of pipes and connections, at a wide variety of facilities. Thousands of components can be scanned in one shift, and it is a valuable tool to help to increase workplace safety, while also improving your bottom line, by helping to identify costly leaks. Using the latest software, AGAT Laboratories' field specialists can record detailed leak information, pictures and videos directly to an online platform, complete with GPS data, helping clients to track and pinpoint leaks immediately and safely.

Applications

- hydrocarbon / natural gas imaging
- SF6 gas imaging
- optical gas imaging and predictive maintenance thermography
- EPA regulation conformance

Gas Leak Detection

Substances Detected by FLIR GF320	
Benzene	C_6H_6
Butane	C_4H_{10}
Esoprene	C_5H_8
Ethane	C_2H_6
Ethylbenzene	C_8H_{10}
Heptane	C_7H_{16}
Hexane	C_6H_{14}
Methane	CH_4
Methanol	CH_3OH
Methyl Isobutyl Ketone (MIBK)	$C_6H_{12}O$
Octane	C_8H_{18}
1-Pentane	C_5H_{10}
Pentane	C_5H_{12}
Propane	C_3H_8
Propylene	C_3H_6
Toluene	CH_3