



Biogas Analysis Services

Laboratory Analysis | Sampling Equipment & Supplies | Onsite Sampling

Ohio Lumex is a leading source for comprehensive *Biogas Analysis Services*, including lab analysis and on-site sampling of waste-to-energy, landfill gas, wastewater, and other renewable energy projects. Our Accredited Laboratory offers an all-inclusive range of biogas analysis services performed according to industry methods and standards, including ASTM, ISO, EPA, etc.

Our services apply to a variety of applications at biogas sites working with renewable energy, including RNG interconnection compliance (both startup and ongoing), pipeline integrity, process control, and various research and development efforts.

Applications

- ▶ Landfills
- ▶ Wastewater Treatment Plants
- ▶ Food Waste Digesters (co-digestion)
- ▶ Dairy Farms
- ▶ Hog and Chicken Farms
- ▶ Others

Available Services

- ▶ Laboratory analysis of biogas composition, including:
 - ▶ Methane (CH₄)
 - ▶ Carbon Monoxide (CO)
 - ▶ Carbon Dioxide (CO₂)
 - ▶ Hydrogen (H₂)
 - ▶ Nitrogen (N₂)
 - ▶ Oxygen (O₂)
 - ▶ Mercury (Hg)
 - ▶ Ammonia (NH₃)
 - ▶ Chlorine (Cl)
 - ▶ Biologicals
 - ▶ Siloxanes
 - ▶ TMS
 - ▶ L2, L3, L4, L5
 - ▶ D3, D4, D5, D6
 - ▶ Flourine (F)
 - ▶ Total Reduced and Speciated Sulfur
 - ▶ Particulate Matter (PM)
 - ▶ VOCs
 - ▶ BTU
- ▶ Weekly sampling system rental, sample cylinder rental, instruction, and supplies to ensure your sampling team delivers quality samples for analysis
- ▶ Onsite sampling from our experienced Field Services team
- ▶ The industry's best turnaround time, with options to meet your specific project needs





Biogas Testing Services

Require additional testing? Contact our lab as we may have other services available upon request.

Offering	Test Method	Sampling Options ³
Major Gases and BTU Calculation: CO ₂ , CH ₄ , O ₂ , N ₂ , CO, H ₂ , BTU	ASTM D1946 (biogas) and ASTM D3588	Tedlar Bag ¹ Passivated Canister ² Passivated HP Cylinder ²
Extended Hydrocarbons (C2+)	GC-TCD or equivalent	Tedlar Bag ¹ Passivated Canister ² Passivated HP Cylinder ²
Total Hg	ASTM D5954	Passivated HP Cylinder ² Gold Sorbent Traps (x2)
Siloxanes and Silanols: L2, L3, L4, L5, D3, D4, D5, D6, TMS	ASTM D8230	Siloxanes Sorbent Trap Tedlar Bag ¹ Passivated Canister ²
Total and Speciated Sulfur	ASTM D6968	Tedlar Bag ¹ Passivated Canister ² Passivated HP Cylinder ²
	High H ₂ S (if needed) ASTM D6968/D1946/D5504 (if needed)	
Biologicals (MICs): Total Bacteria, SRB, APB, IOB, others available upon request	qPCR	Sterile MIC Gas Sampling Device
Ammonia in Biogas	Ohio Lumex Sorbent Trap Method	NH ₃ Sorbent Traps (x2)
Total Chlorine and Fluorine	Modified EPA OTM-40 (HCl/HF)	HCl/HF Sorbent Traps (x2)
	GC-AED (organic)	Tedlar Bag ¹ Passivated Canister ² Passivated HP Cylinder ²
Metals in Gas: As, Cu, others available upon request	Modified EPA Method 29 (metals in gas as particulate)	Filter

1. Includes: 1) 1/4" NPT to compression fitting adaptor, 2) 1/4" sampling line, and 3) metal can for return shipment.

2. Passivated canisters and HP cylinders are coated with SilcoNert (or equivalent) and undergo thermal vacuum cleaning between every use.

3. In order to maximize sample stability, we recommend collecting gas samples in sorbent traps, passivated canisters, or HP cylinders rather than Tedlar bags. Some gas components may permeate through Tedlar bag materials during shipping, resulting in inaccurate data. If you choose to sample using Tedlar bags, we recommend you ship the samples overnight and select our expedited analysis option.