

ANALYTICAL SERVICES

Method	Analyte	Instrument
EPA METHODS		
EPA Method 3C	Fixed Gases: CO, CO ₂ , CH ₄ , O ₂ , N ₂ - % levels	Micro-TCD
EPA Method 5	Particulate Matter	Gravimetric
EPA Method 8A mod.	H ₂ SO ₄ and SO ₂ (as sulfate)	IC
EPA Method 10	Carbon Monoxide	Horiba PG-250
EPA Method 11	Hydrogen Sulfide	in-lab titrations
EPA Method 12	Lead	ICP/MS
EPA 13B	Fluoride	IC
EPA Method 18	VOCs	GC/FID
EPA Method 18	BTEX: benzene, toluene, ethylbenzene, m&p-xylenes, and o-xylene	GC/FID/MS
EPA Method 18	Hydrocarbons, Total- THC	GC/FID
EPA Method 18	Hydrocarbons, C ₁ -C ₆ & HRVOCs: Methane, Ethane, Ethylene, Propane, Propylene, i-Butane, n-Butane, t-2-Butene, cis-2-Butene, i-Pentane, n-Pentane, 1,3-Butadiene, Hexane, and Acetylene	GC/FID
EPA Method 18-type / ASTM D1946	C ₁ -C ₅ VOCs and Fixed Gases - includes HRVOCs & BTU - %	Micro-TCD
EPA Method 26A	Hydrogen Halides: HCl, HBr, HF	IC
EPA Method 26A	Halogens: Cl ₂ , Br ₂	IC
EPA Method 29	Metals, Multiple including Mercury	ICP/MS & CVAAS
EPA Method 30B	Mercury Vapor	Ohio Lumex RA-915M
EPA Method 201A	Particulate Matter (PM)	Gravimetric
EPA Method 202	Condensable Particulate Matter (CPM)	Gravimetric
EPA Method 300	Anions: F ⁻ , Cl ⁻ , Br ⁻ , SO ₄ ²⁻ , NO ₃ ⁻ , PO ₄ ³⁻	IC
EPA Method 306	Total Chromium and Hexachrome	ICP/MS & HPCL/UV
EPA Method 308	Methanol	GC/FID
EPA Method 315	Methylene Chloride Extractable Matter (MCEM)	Gravimetric
EPA Method 316	Formaldehyde: from Mineral Wool & Wool Fiberglass	UV/VIS
EPA Method 320 mod.	VOCs and Inorganics	In-laboratory FTIR
EPA Method 323	Formaldehyde	UV/VIS
EPA Method 325B	Benzene	GC/MS
EPA Method 7199	Hexavalent chromium: Cr ⁺⁶	HPLC/UV
EPA CONDITIONAL TEST METHODS		
CTM-027	Ammonia	IC
CTM-027 mod.	Cations: Na, K, Li, Mg, Ca, NH ₄	IC
EPA SW-846 METHODS		
SW-846 200.8	Metals	ICP/ MS
SW-846 6020A	Metals	ICP/MS
SW-846 8260B	VOCs - non-potable waters (purge & trap)	GC/MS

Additional Methods Available on Request



For more information contact us toll-free at 844.3.GOLDEN

ANALYTICAL SERVICES (continued)

Method	Analyte	Instrument
EPA TOXIC ORGANIC METHODS		
TO-5	Aldehydes & Ketones	HPLC/UV
TO-8	Phenols & Cresols	GC/MS or FID
TO-11A	Aldehydes & Ketones	HPLC/UV
TO-12	Organics: Total non-Methane	GC/FID
TO-14A	Volatile Organic Compounds (VOCs)	GC/MS (SIM or SCAN)
TO-14A	Hydrocarbons: Light hydrocarbons (C ₁ – C ₆), HRVOCs, BTEX, plus TICS	GC/MS/FID
TO-14A	Organics: NMOCs C ₂ -C ₆ & C ₆₊ , including HRVOCs - ppb levels	GC/FID w/cryogenic pre-concentrator
TO-14A	Organics: C ₁ -C ₆ HRVOCs - ppm levels	GC/FID
TO-14A	BTEX: benzene, toluene, ethylbenzene, m-xylene, p-xylene & o-xylene - ppm levels	GC/FID
TO-15	VOCs (Call for list) - ppb only	GC/MS (SIM or SCAN)
TO-15 + TICS	VOCs (Call for list) + tentatively identified compounds (TICs)	GC/MS
ASTM METHODS		
ASTM D1945	Natural gas: fixed gases and light hydrocarbons, C ₁ -C ₅ & BTU	Micro-TCD
ASTM D1946	Fuel gas: fixed gases and light hydrocarbons, C ₁ -C ₅ & BTU	Micro-TCD
ASTM D1946/M-18	Flare gas: fixed gases and light hydrocarbons, C ₁ -C ₅ & BTU	Micro-TCD
ASTM D5504	Sulfur: Speciation and Total Reduced Sulfur	GC/PPFD
ASTM D6228	Sulfur Compounds,(H ₂ S,)	Micro-TCD
ASTM D6348-03	VOCs and Inorganics	FTIR
NCASI METHODS		
NCASI 98.01	Formaldehyde, Methanol, Acetone, Acetaldehyde, MEK, Phenol—Chilled Impinger method	GC/FID
NIOSH & OSHA METHODS		
NIOSH 1003	Halogenated Hydrocarbons	GC/FID
NIOSH 1457	Esters	GC/FID
NIOSH 1500	VOCs & BTEX (tubes)	GC/FID
NIOSH 1501	Hydrocarbons: Total Petroleum Hydrocarbons (TPH) & BTEX (tubes)	GC/FID
NIOSH 2000	Methanol (silica gel tubes)	GC/FID
NIOSH 2011	Formic acid (filters and tubes)	IC
NIOSH 5506	Hydrocarbons, Aromatic	HPLC/UV
NIOSH 7906	Particulate Fluorides and Hydrofluoric Acid	IC
NIOSH 7907	Hydrogen Chloride, Hydrogen Bromide, and Nitric Acid	IC
NIOSH 7908	Sulfuric Acid and Phosphoric Acid	IC
OSHA VI—6	Hydrogen Peroxide (H ₂ O ₂)	UV/VIS
OSHA 42	Isocyanates: TDI, MDI, HDI	HPLC/UV
ADDITIONAL METHODS		
EPA Compendium Method IO 3.5	Metals in particulate matter using ICP/MS	ICP/MS
PAMS	Hydrocarbons: C ₂ – C ₁₂ - Ozone precursor PAMS List	GC/FID/MS
Part 50 Appendix L	Particulate matter	Gravimetric
RSK 175	Dissolved gases: CH ₄ , C ₂ H ₄ , C ₂ H ₆ in H ₂ O headspace analysis	GC, FID
Scan	Siloxanes	GC/MS
Various methods	Organic acids: i.e. formic, acetic, propionic, etc.	IC or GC/FID
Moisture		TCD

INSTRUMENTATION CAPABILITIES

GC/FID, GC/MS, FTIR, PFPD, Micro GC, Micro (TCDS), UV/VIS, IC/PMS, IC, HPLC. CVAA, TCD, Thermal Desorption

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