



## **EMT's Partial Instrumentation and Methods List**

Depending on the sample matrix and detection limits required, EMT can perform analysis for compounds by a variety of methods. A partial list of our Organics laboratory capabilities is provided below:

### **Volatiles Analysis**

**SW-846 Method 8260** Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS):  
Capillary Column Technique

**SW-846 Method 8021** Halogenated Volatiles by Gas Chromatography Using Photoionization and Electrolytic Conductivity Detectors in Series: Capillary Column Technique

**EPA Method 504** 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-Chloropropane (DBCP) in Water by Micro-extraction and Gas Chromatography

**EPA Method 524** Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry

**EPA Method 624** Protocol for the Analysis of Purgeable Organic Priority Pollutants in Industrial Municipal Wastewater

**EPA Method TO-14** Determination of Volatile Organic Compounds in Ambient Air Using Specially Prepared Canisters With Subsequent Analysis by Gas Chromatography

### **Semivolatiles Analysis**

**SW-846 Method 8270** Determination of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS):  
Capillary Column Technique

**EPA Method 625** Protocol for the Analysis of Base/Neutral and Acid Extractable (BNA) Organic Priority Pollutants in Industrial and Municipal Wastewater



**PNAs Analysis**

- SW-846 8270** Determination of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Column Technique
- SW-846 8310** Polynuclear Aromatic Hydrocarbons by High Performance Liquid Chromatography (HPLC)
- EPA Method 550** Polycyclic Aromatic Hydrocarbons (PAHs) by Liquid-Liquid Extraction and HPLC with Coupled UV and Fluorescence Detection

**Pesticides Analysis**

- SW-846 Method 8081** Determination of Organochlorine Pesticides, Halowaxes, and PCBs as Arochlors by Capillary Column/Gas Chromatography
- EPA Method 508** Chlorinated Pesticides by Gas Chromatography (GC) with an Electron Capture Detector (ECD)
- EPA Method 608** Organochlorine Pesticides and PCBs in Wastewater by Gas Chromatography Electron Capture Detector

**PCBs Analysis**

- SW-846 Method 8082** Polychlorinated Biphenyls (PCBs) by Gas Chromatography
- EPA Method 608** Organochlorine Pesticides and PCBs in Wastewater by Gas Chromatography Electron Capture Detector

**Herbicides Analysis**

- SW-846 Method 8315** Determination of Carbonyl Compounds by High Performance Liquid Chromatography (HPLC)
- SW-846 Method 8321** Determination of Solvent-Extractable Non-Volatile Compounds by High Performance Liquid Chromatography Thermospray/Mass Spectrometry (HPLC/TSP/MS) or Ultraviolet (UV) Detection

**Miscellaneous Analysis**

**Total Petroleum Hydrocarbons (TPH)**

- SW-846 Method 8015B** Non-Halogenated Volatile Organics by Gas Chromatography



**Wisconsin Gasoline Range Organics (GRO) Analysis**

**SW-846 Method 8015B** Non-Halogenated Volatile Organics by Gas Chromatography

**Wisconsin Diesel Range Organics (DRO) Analysis**

**SW-846 Method 8015B** Non-Halogenated Volatile Organics by Gas Chromatography



**Organics Lab Equipment List (as of 1/05)**

2	Hewlett Packard 6890 Gas Chromatograph with 5973 inert MSD and Hewlett Packard Chemstation/Enviroquant software.
2	Hewlett Packard 5890 Series II Gas Chromatographs with 5971A MSD, Hewlett Packard Chemstation/Enviroquant software.
2	Hewlett Packard 5890 Series II Gas Chromatographs with 5971A MSD, Technivent Vector II Data system with Enviroquant software.
2	Hewlett Packard 5890 Series II Gas Chromatographs configured with 2 Electron Capture Detectors (ECD). Each of these Gas Chromatographs uses Hewlett Packard Chemstation software. Each Chromatograph has a tower and injector.
1	Hewlett Packard 5890 Series II Gas Chromatograph with 5972 MSD and Hewlett Packard Chemstation software.
1	Hewlett Packard 5890 Series II Gas Chromatograph with ECD detector
10	7673 Hewlett Packard auto samplers with tray and robotic arm.
2	Hewlett Packard 5890 Series II Gas Chromatographs configured with Photo ionization Detectors.
2	Hewlett Packard 5890 Series II Gas Chromatographs configured with Flame Ionization Detectors.
1	Tekmar ALS 2016 autosampler
1	Tekmar Precept autosampler
4	Archon autosamplers
3	Tekmar LSC 2000 Purge and Trap units
1	Tekmar LSC 3000 Purge & Trap unit.
2	Tekmar LSC 3100 Purge & Trap units.
1	Hewlett Packard 1100 Series HPLC with a Fluorescence Detector and Diode Array Detector. This system utilizes HP Chemstation software.
1	Hewlett Packard 1090 Series HPLC with a Fluorescence Detector and Diode Array Detector. This system utilizes HP Chemstation software.
1	Hewlett Packard Prep station with bar code reader and mixer.
3	Medisonic dual horn sonicators
4	Zymark Turbovaps
1	Dionex Accelerated Solvent Extractor
3	Analytical balances capable of weighing to at least 0.1 mg



**Inorganics/Wet Chemistry Lab Equipment List (as of 1/05)**

1	Thermo Jarrell Ash Inductively Coupled Plasma Emission Spectrophotometer with autosampler.
1	Leeman Hydra Mercury Analyzer.
1	Agilent 7500a Inductively Coupled Plasma Mass Spectrometer with autosampler.
1	Dionex DX-100 Ion Chromatograph.
1	CEM MDS 2000 microwave digester.
1	CEM MDS 81D microwave digester.
2	Precision Distillation units for cyanide analysis, each capable of 10 simultaneous analysis.
5	TCLP rotary extractors. Capability of extracting 36 simultaneous samples.
11	Zero Head Space extractors.
50	Soxhlet Distillation units.
10	Phenol Distillation units.
2	Analytical balances capable of weighing to at least 0.1 mg
1	Dohrmann DC 190 TOC unit
1	Dohrmann DX 2000 TOX unit
1	Hach COD Digester
1	Hach Turbitometer
1	Orion Karl Fisher Titrator
	A variety of Autopipetors of varying sensitivity for various method specific applications