



B. LABORATORY INSTRUMENTATION

1. Gas Chromatography Instrumentation

a. Hydrocarbons

TPH(g/ss)- MBTEX (EPA 8015Bm / 8020A / 8021B)

5 HP 5890 GCs with OI PID-FID tandem detectors; 5 autosamplers (1 Archon, 4 Tekmar)

TPH(ss /jf /k /d /mo) (EPA 8015Bm)

5 HP 5890 / 6890 GCs with 6 FID detectors, 5 liquid autosamplers with 10 injection towers

b. Volatiles Including Soil Gas & Indoor Air

Volatile Organics by GC-MS (EPA 524.2/624/8240B/8260B)

6 HP 6890 / 7890 GCs with 6 HP 5973 / 5975 MSDs; 6 Archon autosamplers

Volatile Organics by GC-MS (EPA TO14, TO15, TO3)

2 HP 6890 GC with 1 HP 5975 MSD & 1 FID; autosamplers

Volatile & Semi-Volatile Organics by GC-MS (EPA TO17)

1 HP 6890 GC with 1 HP 5975 MSD and 1 PE TD unit & autosampler

c. Pesticides & Herbicides & R&D

Chlorinated Pesticides / PCBs (EPA 505 / 508 / 508.1 / 608 / 8080A / 8081A / 8082)

4 HP 5890 / 6890 GCs each with 2 ECD detectors, 1 liquid autosampler, with 2 injection towers

Nitrogen-Phosphorous Pesticides (EPA 507 / 614 / 8140B / 8141A)

1 HP 6890 GC with 2 NPD detectors, 1 liquid autosampler with 2 injection towers

Nitrogen-Phosphorous Pesticides (EPA 507 / 614 / 8140B / 8141A)

1 Varian Saturn 4000 GC-MS (IT); 1 liquid autosampler

1 Varian GC-MS-MS (3Q); 1 liquid autosampler

Chlorinated Herbicides (515.1 / 515.2 / 8150B / 8151A)

1 HP 6890 GC with 2 ECD detectors, liquid autosampler with 2 injection towers

Pyrethrins & Toxaphene

1 Agilent 5975 CI-MS with 7890 GC, 1 liquid autosampler and injection tower



d. Semi-Volatiles By GC-MS

Semi-Volatile Organics by GC-MS (EPA 525.2 / 625 / 8270C)

- 3 HP 6890 GCs with 3 HP 5973 MSDs; 3 liquid autosamplers with 3 injection towers
 - 1 Varian Saturn 4000 Ion Trap GC-MS with autosampler
 - 1 HP 5975 MSD with HP 7890 GC and liquid autosampler & injection tower
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e. Dioxins & Dibenzofurans

- 1 Waters Autospec Premier with Agilent 7890 GC, liquid autosampler with injection tower
 - 1 Varian 450 GC-MS-MS with autosampler & injection tower
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f. Organometallics

Organic Tins (Mono thru tetra-butyl tin, some phenyl tins)

- 1 HP 6890 GC with 1 FPD detector, liquid autosampler with injection tower

Organic Mercury (Methyl mercury, EPA 1630)

- 1 HP 5890 GC with 1 AFS detector, autosampler

Organic Lead (Tetraethyl & Tetramethyl lead)

- 1 HP 5890 GC with 2 ECD detectors, liquid autosampler with 2 injection towers

Organic As, Se, S, etc. Hydride-Forming Elements

- 1 PSA Millenium Excalibur hydride generator-AAF detector coupled to 1 IC & 1 GC
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g. Light Gases by GC-PDD / TCD / FID

Light Gases by GC-FID (RSK 175, EPA TO-3), GC-TCD / PDD (EPA 3C, ASTM D 1946-90)

- 1 Varian GC with 2 TCDs, 1 PDD, 1 FID, 1 autosampler
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2. Liquid Chromatography Instrumentation

a. Pesticides, Aldehydes & PNAs (531.1, 547, 549.2, 550, 554, 610, 8310, 8315, 8318, 8330)

- 5 HP LC-1100 with Tandem UV-VIS - fluorescence detectors. 1 Post-column derivitizer, 1 ELSD detector
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b. Pharmaceuticals, PPCP, Polars, Perchlorate

- 2 Varian 325 LC-MS-MS (3Q) (EPA 1694, 6860, ASTM, UCRM 3)
 - 1 Varian 500 LC-MS (IT)
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3. Ion Chromatography Instrumentation

3 ICs, all with Conductivity detectors and 2 with UV-VIS detectors.

1 IC with Cationic Ion Chromatography ability

4. IR Instrumentation

Computer controlled Bomem MB-120 scanning IR spectrometer; laser irradiation, resolution of 1 wave number and a scanning range of 500-5000cm⁻¹.

5. Metals Instrumentation

2 Agilent 7500c ICP-MS, 1 with hydride capability

1 high resolution ICP with autosampler.

Hitachi Z5700 graphite furnace and autosampler.

2 PSA AFS / AA instruments for mercury analysis

PSA Millenium Excalibur for As, Se, S etc. hydride-forming elements

6. Wet Chemistry, Elemental Analysis Instrumentation & Miscellaneous

1 TOC - TN analyzer including soil module

1 CNS elemental analyzer for solids & liquids

2 Auto-analyzers with autosamplers

2 Auto-titrators

1 Karl Fischer apparatus

Fish Toxicity Lab

Bacteria Lab

7. Solids Analysis

1 Rigaku R-Axis IV XRD

1 Oxford ED2000 XRF

8. Software

HP Chem Station data acquisition software plus various other data acquisition software

Omega LIMS software with output to California DHS EDT, ACE COELT, EQUIS, GISTKEY or virtually any electronic data format.