



# Our Capabilities



1300 424 344  
envirolab.com.au



# Corporate Profile

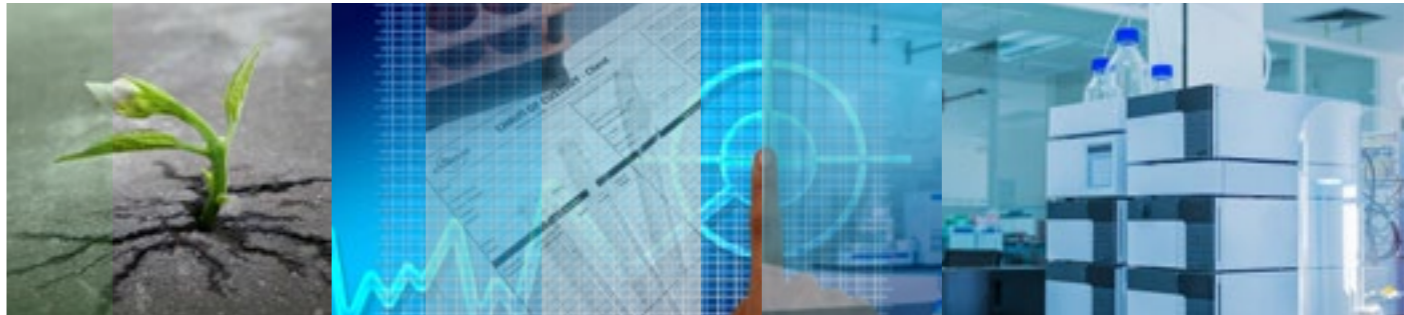
**Envirolab's strength lies in the delivery of quality results and a rapid turnaround that can be customised to your scientific testing requirements.**

**Envirolab Group** is the largest Australian owned and privately operating environment laboratory in Australia. Operating under the brands, Envirolab Services and MPL Laboratories, we are committed to providing clients with a rapid turnaround and quality customer service for scientific testing of environment contamination.

Some of our **testing capabilities** include soil, water, air and occupational hygiene samples for a range of organics, inorganics, microbiological, and forensic toxicology analysis. Our team can assist you to make informed decisions based on a suite of testing services available for identifying the presence of asbestos, leachate analysis and acid sulfate soils.

Test methods and internal procedures of all Envirolab laboratories are compliant with Australian standards and regulations. We take pride in being accredited by industry authorities including the National Association of Testing Authorities (**NATA**) for a range of tests.

For **emerging contaminants**, we test for Perfluorinated Alkylated Substances (PFAS), methamphetamine residue left by clandestine labs and various other environmental residues and contaminants as required by the needs of your brief. Our Quarantined Approved Premises in Sydney and Perth hold a permit to import waters and soils from all countries.



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# Summary of Capabilities

## Logistics Support

From start to finish, Envirolab identifies and provides scientific testing solutions that meet unique specifications. By working closely with clients, our team will establish the necessary procedures for an efficient and effective analytical service. Some of these procedures include:

### Reporting Limits

The entry of data, including reporting limits ensures consistency of analysis for ongoing sample batches.

### Report Formatting

From performing test runs and ongoing adjustment, we work with our clients to establish a standard report format. Where required, this also allows for the automatic upload of all analytical data into the site database.

### Bottles / Jars

Based on our client needs, we determine sample material and volume requirements for bottles, jars and eskies. We then work with our clients to implement a scheduled program for deliveries where, if appropriate, bottles can also be packed into sets to save sorting on-site.

### Timeliness of Deliveries

Deliveries of bottles, jars and eskies are normally scheduled the month before the analysis of samples is scheduled.

The timeline for delivery is also confirmed with our client prior to commencement, so adequate stocks of required items on-site is assured. Additional items or stocks can also be sent up at any time on request.

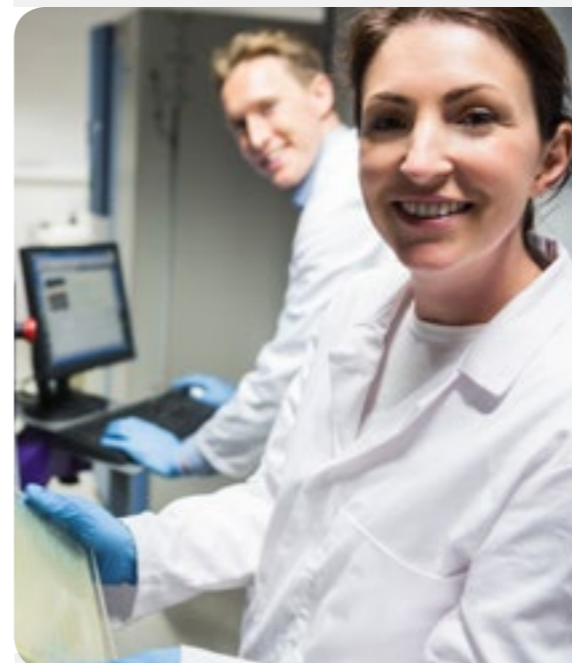
### Interim Reports

To obtain selected analytical data as soon as available and ahead of the other results (e.g. microbiological ahead of chemical), interim reports can be issued at no extra charge. These can also be requested on an ongoing basis or specifically on each Chain of Custody form.

### Online Results

Results can also be easily accessed as they become available, ahead of report generation, through our innovative and easy-to-use online portal.

## Technical Support



Apart from personalised service and fast turnarounds, Envirolab takes pride in providing technical support.

Our wide range of analytical in-house services and sample matrices provide an ideal *one-stop shop* across a number of client departments and consultancy areas.

At an operational level, we maintain a high ratio of senior and experienced staff to assist clients with all manner of technical queries at any time. All senior staff are readily contactable by phone and email and will respond to queries promptly at all times.

Our staff focused culture has also resulted in a very low turnover, so you can be confident that you will be working with the same team.

## Innovation

Envirolab invests in equipment and resources for the introduction of new analytical methods, while also ensuring that technologies already in use are the most current on the market.

PCR instrumentation was purchased in 2014 for performing in-house speciation of Naegleria (a key requirement for amoebae analysis in water samples). Our laboratory in Perth is the **ONLY laboratory** in Western Australia with this capability and only one of two laboratories in Australia.

Envirolab is also equipped with three Inductively Coupled Plasma Mass Spectrometers with Octopole Reaction Cells (ORC-ICP-MS). These instruments are used for determining low level elements in a diverse range of sample matrices and for the determination of bioavailable elements. They are particularly useful for detection of low level, interference free, metals in saline waters.



Envirolab Group is continually looking for new and emerging contaminants to be added onto our analytical scope. As such, our array of instrumentation includes a GC/QQQ and an LC-MS/MS which are used both in routine analyses as well as for project-specific analyses including nicotine, Trenbolone, Prozac, ureas and PFAS compounds.





## Acid Sulfate Soils

Acid Sulfate Soils
SPOCAS
pH KCl
TAA
KCl extractable S, Ca, Mg
pH <sub>ox</sub>
TPA
Peroxide extractable S, Ca, Mg
ANCe (Excess Neutralisation capacity)
SNAS (Retained acidity)



### Turnaround Time

We offer a standard 5 working day TAT for SPOCAS or SCR Suite analysis.



Faster TAT's are available. Surcharges may apply.

### Sampling

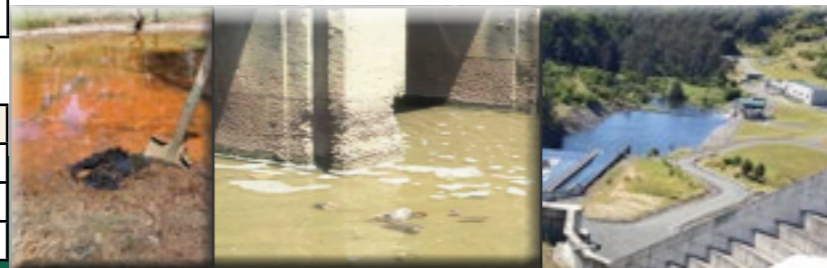
A minimum of 200g should be collected in zip-lock bags to minimise contact with air. Large shells, wood, charcoal and stones should be removed in the field, but biological remnants such as roots should not be removed.

Samples should be kept cold in the field and should reach the lab within 24 hours of collection. Where this is not possible, they should be either frozen or dried at 85°C to extend holding time.

SPOCAS
pH KCl
TAA
KCl extractable S, Ca, Mg
pH <sub>ox</sub>
TPA
Peroxide extractable S, Ca, Mg
ANCe (Excess Neutralisation capacity)
SNAS (Retained acidity)

Chromium Reducible Sulfur
SCr
pH KCl
TAA
If pH:
<4.5 - SNAS performed
>6.5 - ANC performed

Field Test
pHF
pHFOX
Reaction Rate



The effects of acid sulfate



## Acid Mine Drainage

pH Paste (1:2)
EC Paste (1:2)
Total Sulphur
Sulphate Sulphur
Sulphide Sulphur
Acid Soluble Sulphur (SHCl) - 4M HCl extraction
Total Oxidisable Sulphur (TOS)
Total Carbon
TOC (by CS Analyser)
Total Inorganic Carbon
NAG including NAG pH
NAG - Extended Boil
NAG Sequential / per stage
NAG Kinetic
ANC
Acid Buffering Characteristic Curves (ABCC)
APP/MPA (requires also Total S determination - see above)
NAPP (ABA Package) (Includes ANC, APP, Total S)
Column Leaching (Free Draining)
Metals by 4 acid digest and ICP scan
Basic AMD Suite: Sample Prep, EC (1:2), pH (1:2), NAG and NAG pH, NAPP (including ANC and Total S)



## Asbestos

Soil or dust (up to 100g sample)
Soil - Clay based (East Coast NEPM)
Soil - Sandy (WA Dept Health)



## Agricultural

Cation Exchange Capacity (CEC) - NH <sub>4</sub> Cl
Cation Exchange Capacity (CEC) - NH <sub>4</sub> Cl and ESP
DTPA or EDTA or Mehlich3 Extractable Metals
Exchangeable Sodium Percent (ESP - includes CEC)
P Sorption Capacity
P Buffer Index (PBI)
P Retention Index (PRI)
P Colwell
P Bray
Emerson Aggregate Test
Sodium Absorption Ratio (SAR)







## Inorganics and Metals

<b>Physical</b>
Compositing
Moisture
Aggressivity: Cl, SO4, pH, EC, Resistivity
Clay Content
Conductivity (1:5 water soluble)
Electrical Conductivity (EC)
Loss on Ignition (LOI)
pH (1:5 soil:water)
pH (1:2 soil:water)
pH (CaCl2 extraction)
pHF
pHFOX
Resistivity (Current)
Resistivity (Calc.)
Salinity
Texture
Texture/Salinity Classification
<b>Alkalinity</b>
Acidity - 1:5 water soluble
Alkalinity - 1:5 water soluble
Acidity + Alkalinity - 1:5 water soluble
Carbonates (estimate)
<b>Anions</b>
Bromide (Br) – 1:5 water soluble
Bromine and/or Iodine
Chloride (Cl) – 1:5 water soluble
Chloride (Cl) – total (mainly concrete)
Fluoride – total by fusion
Fluoride – 1:5 water soluble
Iodide - water soluble
Sulphate (SO4) – water soluble
<b>Carbon / Organic matter</b>
Total Organic Carbon (TOC)/Total Organic Matter (TOM) by titration (Walkley Black)
Total Organic Carbon (TOC) / Total Organic Matter (TOM) by combustion (sediments)
Total Carbon
<b>Cyanides</b>
Cyanide- Total
Cyanide - Free
Cyanide - Weak Acid Dissociable (WAD)
Cyanide Amenable (Amenable to Chlorination - labile)

Cyanide Amenable (Amenable to Chlorination - labile)
Foreign Matter
Foreign Matter - ENM (Rubber, plastic, bitumen, paper, cloth, paint, wood)
Foreign Matter - Aggregates (Rubber, plastic, paper, cloth, paint, wood, other vegetable matter)
Foreign Matter - Railway Ballast
Foreign Matter - Fines (glass, metal, rigid plastic, light flexible film) + Sieving (proportion retained on sieves 0.425, 9.5 & 26.5mm)
Nutrients
Ammonia (1:5) as N - water or KCl extraction
Nitrate as N – water soluble
Nitrite as N – water soluble
NOX - water soluble
Organic N (TKN - NH3)
Inorganic N (NOX + NH3)
Total Kjeldahl Nitrogen (TKN)
Total Nitrogen - TKN+ NOx
Total Nitrogen - TKN + NO2 + NO3
Phosphate (PO4) as P – water soluble
Phosphate Sorption Index (PSI)
Particle Sizing (PSD)
Clay only (i.e. <2µm) Hydrometer
Particle Size Distribution - Sieving only (75mm - 75µm)
Particle Size Distribution - Hydrometer only (75-20µm, <20-2µm, <2µm (Clay fraction))
Particle Size Distribution - Sieving and Hydrometer (as above)
RTA - Sieving (proportion retained on sieves 0.475, 9.5 & 26.5mm)
Sulphur forms
Acid Volatile Sulphur (AVS)
SEM (Simultaneous Extractable Metals)
Sulphate (SO4) – water soluble
Sulphide (Pres/Abs)
Sulphide - Total (NEPM, B3 section 9.4 - acid soluble and insoluble)
TOS - Total Oxidisable Sulfur
Miscellaneous
MBAS (Surfactants) water soluble
Oxidant Demand (NOD/SOD) includes residual persulfate over 1-4 time periods with buffer capacity
Sugar in soil/concrete

**Our specialist experience and modern instrumentation can help you to identify absolute trace levels of inorganic elements**

<b>Metals</b>	
Aluminium	Strontium
Antimony	Sulphur
Arsenic	Tantalum
Barium	Tellurium
Beryllium	Terbium
Bismuth	Thallium
Boron	Thorium
Cadmium	Thulium
Caesium	Tin
Cerium	Titanium
Chromium	Tungsten
Cobalt	Uranium
Copper	Vanadium
Dysprosium	Ytterbium
Erbium	Yttrium
Europium	Zirconium
Gadolinium	Zinc
Gallium	
Germanium	
Gold	
Hafnium	
Holmium	
Indium	
Iridium	
Iron	
Lanthanum	
Lead	
Lithium	
Lutetium	
Manganese	
Mercury	
Molybdenum	
Neodymium	
Nickel	
Niobium	
Osmium	
Palladium	
Phosphorus	
Platinum	
Praseodymium	
Rhenium	
Rhodium	
Rubidium	
Ruthenium	
Samarium	
Scandium	
Selenium	
Silicon	
Silver	



### Cations: ICP-OES (Acid extractable)

Cation Suite - Acid Extractable (Ca, K, Mg, Na)

### Speciality Metals

Arsenic (Speciated) - water soluble

AVS + SEM

Bioavailable Metals - see DTPA or EDTA or Mehlich or Dilute Acid Extractable Metals or PBET (see agriculture)

Bromine and/or Iodine

Dilute Acid Extractable Metals (1M HCl)

DTPA or EDTA or Mehlich3 Extractable Metals

Hexavalent Chromium (Cr6+)

Methyl Mercury

PBET - Physiological Based Extraction Test - various metals

SEM (Simultaneous Extractable Metals)

Silicon as SiO2 (caustic fusion)

Sodicity (see ESPabove)

### Organometallics

Organotins (MBT/DBT/TBT)

Tributyl Tin (TBT)

Organotins full suite (MBT, DBT, TBT, MPT, DPT, TPT, MOT, DOT, TOT, Tetrabutyltin, Tricyclohexyltin)

## Microbiology

E.coli
Faecal Coliforms (Thermotolerant Coliforms and E.coli)
Total Coliforms
Faecal enterococci (F. ent)
Pseudomonas aeruginosa (Hydrocarbon Utilising Bacteria)
Salmonella
Clostridium perfringens
Iron Precipitating Bacteria
Sulfate Reducing Bacteria (SRB) - Presence / Absence
Sulfate Reducing Bacteria (SRB) Semi-quantitative
Iron Reducing Bacteria
Enteric Viruses & Helminth Ova







## Organics

### Volatile Organic Compounds (VOC)

VHC - Volatile Chlorinated (VCH) / Halogenated Hydrocarbons
Formaldehyde + other carbonyls (HPLC)
Formaldehyde (Colourimetric - Total)
VOC – Unknown Qualitative Scan (10 major peaks are library matched)

### BTEX

Benzene
Toluene
Ethyl benzene
m/p-xylene
o-xylene
MtBE (optional as MBTEX)
Naphthalene (optional as BTEXN)

### MONOCYCLIC AROMATICS

BTEX (as above)
Styrene (vinyl benzene)
Isopropylbenzene (cumene)
n-propyl benzene
1,3,5-trimethyl benzene
tert-butyl benzene
1,2,4-trimethyl benzene
sec-butyl benzene
4-isopropyl toluene
n-butyl benzene

### Trihalomethanes (THM)

Chloroform (trichloromethane)
Bromodichloromethane
Dibromochloromethane
Bromoform (tribromomethane)

### HALOGENATED ALIPHATICS

1,1,1,2-tetrachloroethane
1,1,1-trichloroethane
1,1,1,2-tetrachloroethane
1,1,2-trichloroethane
1,1-dichloroethane
1,2-dichloroethane
cis-1,2-dichloroethane
trans-1,2-dichloroethane
Carbon tetrachloride
Dichloromethane (methylene chloride; DCM)
Hexachlorobutadiene (HCBD)
Tetrachloroethene (tetrachloroethylene; perchloroethylene; PCE)
Trichloroethene (trichloroethylene; TCE)
Vinyl chloride (chloroethene, chloroethylene)
Dichlorodifluoromethane (Freon CFC-12)
Chloromethane
Bromomethane (methyl bromide)
Dibromomethane
Chloroethane
Trichlorofluoromethane (Freon CFC-13)
1,1-dichloroethane
Bromochloromethane
1,2-dibromo-3-chloropropane (DBCP)
1,3-dichloropropane
1,2,3-trichloropropane
1,1-dichloropropene

### FUMIGANTS

2,2-dichloropropane
1,2-dichloropropane
trans-1,3-dichloropropene
cis-1,3-dichloropropene
1,2-dibromoethane (EDB; ethylene dibromide)

### HALOGENATED AROMATICS

Chlorobenzene
Bromobenzene
2-chlorotoluene
4-chlorotoluene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
1,2,3-trichlorobenzene
1,2,4-trichlorobenzene

### OXYGENATED COMPOUNDS (Ketones, etc.)

Acetone (2-propanone)
Acrolein (2-propenal)
2-butanone (MEK)
2,6-dimethyl-4-heptanone (Diosobutyl ketone, DIBK)
1,4-Dioxane
2-hexanone (MBK)
4-methyl-2-pentanone (MIBK)
2-nitropropane
Tetrahydrofuran
Vinyl acetate

### FUEL OXYGENATES SCREEN

TAAE (tert amyl ethyl ether)
TAME (tert amyl methyl ether)
MtBE (methyl tert butyl ether)
DIPE (diisopropyl ether)
ETBE (ethyl tert butyl ether)
TBA (tert butyl alcohol)

### MISCELLANEOUS VOCs

1,1,2-trichlorotrifluoroethane (Freon CFC-113)
Acrylonitrile
Allyl Chloride (3-chloroprene)
Carbon disulfide
Chloroprene (Neoprene, Rubber)
cis-1,4-Dichloro-2-butene
1-Chlorobutane
Iodomethane
Naphthalene
Nitrobenzene
Propionitrile
Hexane
trans-1,4-dichloro-2-butene
Cyclohexane

### SOLVENT SCREEN

Benzene
Toluene
Ethylbenzene
m/p xylenes
o-xylene
MTBE
Dichloromethane (methylene chloride; DCM)
Tetrachloroethene (tetrachloroethylene; perchloroethylene; PCE)
2-butanone (MEK)
Carbon Tetrachloride
Trichloroethene (trichloroethylene; TCE)
Carbon Disulphide
Chloroform (trichloromethane)
Diethyl Ether

Acrylonitrile
Methyl Acrylate
Methyl Methacrylate
Ethyl Methacrylate
Methacrylonitrile
Acetone (2-propanone)
Tetrahydrofuran
4-methyl-2-pentanone (MIBK)
Hexane
2-hexanone (MBK)

### BROMINATED VOC

Vinyl bromide
Dibromomethane
Trans-1,2-dibromoethene
Cis-1,2-dibromoethene (total)
Bromoform
Tribromoethene
1,1,2,2-Tetrabromoethane

### Volatile Fatty Acids

Volatile Fatty Acids (VFAs) - Total
Acetic
Propanoic
Iso-butyric
Butyric
Iso-valeric
Valeric
Iso-caproic
Caproic
Heptanoic



### Semi-Volatile Organic Compounds (SVOC)

SVOC - Standard 8270 suite (>100 analytes as default)
SVOC Extended Suite (>200 analytes)
SVOC – Unknown Qualitative Scan (10 major peaks are library matched)
AFFF Screen (PFOS/ PFOA/6:2Fts)
Aldehydes and Ketones (Carbonyls)
Alcohols (Glycols are separate analysis, see below)
AOX (water leachable)
Coal Tar (note - approximate with high degree of uncertainty)
Cresol/ Coal Tar Creosotes (PAH & Methyl Phenol Package) - by GCMS
Diuron and Fluometuron
Explosives
Glycols (Alcohols are separate analysis, see above)
Glyphosate (Roundup) (& AMPA on request)
Oil and Grease (Gravimetric)
PFOS/PFOA
Toxaphene

### Carbamates (Herbicides)

Carbofuran
Carbaryl
Molinate



### Phenoxy Acid Herbicides

Acifluorfen
2,4,5-T
2,4,5-TP (Silvex)
2,4,6-T
2,4-D
2,4-DB
2,6-D
3,5-dichlorobenzoic acid
Bromoxynil
Clopyralid
DCPA (chlorthal) diacid (does not extract in water)
Dicamba
Dichlorprop
Dinoseb
loxyneil
MCPA
MCPB
Mecoprop (MCP)
o-chlorophenoxy acetic acid
4-CPA (p-chlorophenoxy acetic acid)
Picloram
Triclopyr
Bentazon
Chloramben
Fluroxypyr
Dalapon (2,2-DPA)

### Sulfonyl Ureas Herbicides

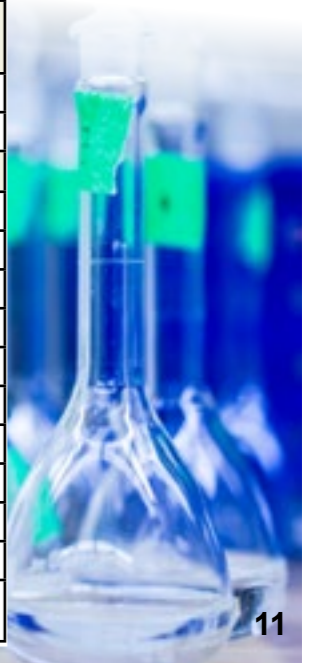
Metsulfuron Methyl
Chlorsulfuron

### Triazine Herbicides

Atrazine
Ametryn
Cyanazine
Hexazinone
Irgarol
Metribuzin
Propazine
Prometryn
Simazine
Terbutylazine
Terbutryn

### Phenyl Ureas/ Carbamate/ Thiocarbamate Herbicides

Methomyl
Aldicarb
Propoxur
Carbofuran
Mexacarbamate
Propham
Oxamyl
Fluometuron
Fenuron
Carbaryl
Methiocarb
Tebuthiuron
Chlorpropham
Monuron
SWEP
Isoproturon
Diuron
Linuron
Siduron
Thiobencarb (benthiocarb)
Neburon
Molinate
Vernolate
Pebulate







Organochlorine Pesticides (OCP)
HCB
alpha-BHC (a-BHC)
gamma-BHC (lindane)
beta-BHC (b-BHC)
Heptachlor
delta-BHC (d-BHC)
Aldrin
Heptachlor Epoxide
gamma-Chlordane (g-chlordane, trans-chlordane)
alpha-chlordane (a-chlordane, cis-chlordane)
Endosulfan I (a-endosulfan)
p,p'-DDE
Dieldrin
Endrin
p,p'-DDD
Endosulfan II (b-endosulfan)
p,p'-DDT
Endrin aldehyde
Endrin Ketone
Endosulfan Sulphate
Methoxychlor
isodrin
o,p'-DDE
o,p'-DDD
o,p'-DDT
Mirex
trans-nonachlor

Organophosphate Pesticides (OPP)
Azinphos methyl (guthion)
Bromophos Ethyl
Chlorpyrifos (chlorpyrifos ethyl)
Chlorpyrifos-methyl
Coumaphos (Co-Ral)
Diazinon (dimpylate)
Dichlorvos
Dimethoate
Disulfoton
Ethion
Fenamiphos (phenamiphos)
Fenitrothion
Fenthion
Malathion (maldison)
Methidathion
Mevinphos
Parathion (parathion-ethyl)
Parathion-methyl
Phorate
Phosalone
Ronnel (fenchlorphos)
Carbophenothion
cis-Clorfenvinphos
Demeton-S-methyl
EPN
Ethoprophos (ethoprop)
Fensulfthion
Monocrotophos
Naled (dibrom)
Phosmet
Pirimiphos-ethyl
Pirimiphos-methyl
Prothiophos (tokuthion)
Sulprofos (bolstar)
Tetrachlorvinphos (stirophos)
trans-Clorfenvinphos

Polycyclic Aromatic Hydrocarbons (PAH)
Naphthalene
Acenaphthylene
Acenaphthene
Fluorene
Phenanthrene
Anthracene
Fluoranthene
Pyrene
Benzo (a) anthracene
Chrysene
Benzo (b,j & k) fluoranthene
Benzo (a) pyrene
Indeno (1,2,3-c,d) pyrene
Dibenzo (a,h) anthracene
Benzo(g,h,i) perylene
2-methyl naphthalene
3-methylcholanthrene
Benzo (e) pyrene
Perylene
Coronene
Polychlorinated Biphenyls (PCB)
Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
PCB Congener 28
PCB Congener 52
PCB Congener 101
PCB Congener 118
PCB Congener 138
PCB Congener 153
PCB Congener 180

PFAS
Perfluorobutane sulfonic acid
Perfluorohexane sulfonic acid
Perfluorooctane sulfonic acid
Perfluorodecane sulfonic acid
Perfluorobutanoic acid
Perfluorohexanoic acid
Perfluoroheptanoic acid
Perfluorooctanoic acid
Perfluorononanoic acid
Perfluorodecanoic acid
Perfluoroundecanoic acid
Perfluorododecanoic acid
Perfluorotridecanoic acid
Perfluorotetradecanoic acid
4:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer sulfonic acid
8:2 Fluorotelomer sulfonic acid
Perfluorooctane sulfonamide
N-Methyl perfluorooctane sulfonamide
N-Ethyl perfluorooctane sulfonamide
N-methyl perfluorooctane sulfonamidoethanol
N-Ethyl perfluorooctane sulfonamidoethanol
Total Phenolics (as Phenol)
Speciated Phenols
Phenol
2-Chlorophenol
4-Chloro-3-Methylphenol
2-Methylphenol (o-cresol)
3/4-Methylphenol (m/p-cresol)
2-Nitrophenol
2,4-Dimethylphenol
2,4-Dichlorophenol
2,6-dichlorophenol
2,4,5-trichlorophenol
2,4,6-trichlorophenol
2,4-dinitrophenol
4-nitrophenol
2,3,4,6-tetrachlorophenol
2-methyl-4,6-dinitrophenol
pentachlorophenol
Extra Vic EPA Phenols:
2,3,4,5 & 2,3,5,6-tetrachlorophenol
2-cyclohexyl-4,6-dinitrophenol (dinex)
dinoseb

Phthalates
Bis(2-ethylhexyl)phthalate (di-(2-ethylhexylphthalate)) (DEHP)
Butyl Benzyl phthalate (BBP)
Diethyl phthalate (DEP)
Dimethyl phthalate (DMP)
di-n-butyl phthalate (DBP)
di-n-octyl phthalate (DOP)
On request only:
Bis(2-ethylhexyl)adipate (di-(2-ethylhexyladipate)) (DEHA)
Semi-volatile chlorinated hydrocarbons (SVCH)
1,2,4,5-Tetrachlorobenzene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Pentachlorobenzene
Pentachloroethane
1,2,3,4-Tetrachlorobenzene
1,2,3,5-Tetrachlorobenzene
1,2,3-Trichlorobenzene
1,3,5-Trichlorobenzene
Synthetic Pyrethroids
Bifenthrin
Lambda-Cyhalothrin
Cyfluthrin
Cypermethrin
Deltamethrin
Esfenvalerate
cis-permethrin
trans-permethrin
Triazole Fungicides
Propiconazole Isomer A
Propiconazole Isomer B
Tebuconazole
Anilines and Amines
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Chloroaniline
4-Nitroaniline
Aniline
Dibenzofuran



Haloethers:
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
4-bromophenyl phenyl ether
4-chlorophenyl phenyl ether
Nitrosamines:
Diphenylamine
N-Nitrosodi-n-butylamine (NDBA)
N-Nitrosodi-n-propylamine (NDPA)
N-Nitrosomorpholine (NMOR)
N-Nitrosopiperidine (NPIP)
4-Aminobiphenyl
N-Nitrosodiethylamine (NDEA) (N-ethyl-N-nitroso-ethanamine)
N-Nitrosomethyl-ethylamine
N-Nitrosopyrrolidine (NPYR)
Nitroaromatics and Ketones:
1,3-Dinitrobenzene (meta)
2,6-Dinitrotoluene
5-Nitro-o-toluidine
Acetophenone
Azobenzene
Isophorone
Nitrobenzene
Pentachloronitrobenzene
Phenacetin
2,4-Dinitrotoluene
p-(Dimethylamino) azobenzene

Miscellaneous SVOC
1,3,5-trinitrobenzene
Bromacil
Demeton-O
Demeton-S
Dicofol
Dinex (2-cyclo-4,6-dinitrophenol)
N-Nitroquinoline-N-oxide
o-Toluidine
Oxychlordane
Temephos (Abate)
Benzyl alcohol
Carbazole
Ethyl methanesulfonate
Isosafrole Isomer 1
Isosafrole Isomer 2
Methapyrilene
p-dimethylaminoazo benzene
Safrole
Methyl methanesulfonate
Alachlor
Metolachlor
e-caprolactam
Trifluralin
Cyclohexanone
2-picoline

Leaches
TCLP
TCLP - MEP (Multiple Extraction Procedure)
TCLP - SPLP
Elutriate
ASLP
LEAF
USEPA 1313 Extraction - Parallel Leach
USEPA 1314 Extraction - Column Leach
USEPA 1315 Extraction - Monolith Leach
USEPA 1316 Extraction - Parallel Leach
Illicit drugs and precursors
Ephedrine
Pseudoephedrine
Amphetamine
Methamphetamine
MDA
MDMA





## Water Testing

### Asbestos

Fibre count in water
Fibre confirmation by SEM

### Inorganics and Metals

#### Physical parameters

pH
Electrical Conductivity (EC)
Biochemical Oxygen Demand (BOD)
Carbonaceous Biochemical Oxygen Demand (CBOD)
Chemical Oxygen Demand (COD)
Colour (True or Apparent)
Dissolved Oxygen
Turbidity
Salinity
Resistivity
Specific Gravity

#### Solids

Total Solids
Total Suspended Solids (TSS)
Total Dissolved Solids (TDS)
Total Volatile Suspended Solids (TVSS)
Total Settleable Solids

#### Alkalinity & Acidity

Acidity
Alkalinity Suite (CO <sub>3</sub> , HCO <sub>3</sub> , OH, Total Alkalinity)
Total Alkalinity
Hydroxide
Carbonate
Bicarbonate
Carbon Dioxide (CO <sub>2</sub> ) - Free (Dissolved)
Carbon Dioxide (CO <sub>2</sub> ) - Total

### Anions & Cations

Anions – Major (Cl, SO <sub>4</sub> , Alkalinity)
Anions – Minor (NO <sub>2</sub> , NO <sub>3</sub> , F, PO <sub>4</sub> )
Bromine and / or Iodine (Total)
Cations - Ca, K, Mg, Na
Ionic Balance
Bromide
Chloride
Fluoride
Hardness - Ca or Mg
Iodide
Sodium Absorption Ratio (SAR)
Sulphate
Sulphide
Sulphite
Thiosulphate

### Cyanides

Total Cyanide
Amenable Cyanide (Amenable to Chlorination - labile)
Weak Acid Dissociable (WAD) Cyanide
Free Cyanide
Thiocyanate (SCN)

### Nutrients

Ammonia (NH <sub>3</sub> ) as N
Nitrate (NO <sub>3</sub> ) as N
Nitrite (NO <sub>2</sub> ) as N
NO <sub>x</sub> as N (NO <sub>2</sub> + NO <sub>3</sub> )
Total Kjeldahl Nitrogen (TKN)
Total Nitrogen
Organic Nitrogen
Inorganic Nitrogen
Phosphate (PO <sub>4</sub> ) as P
Total Phosphorus

### Metals

Aluminium
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Caesium
Cerium
Chromium
Cobalt
Copper
Dysprosium
Erbium
Europium
Gadolinium
Gallium
Germanium
Gold
Hafnium
Holmium
Indium
Iridium
Iron
Lanthanum
Lead
Lithium
Lutetium
Manganese
Mercury
Molybdenum
Neodymium
Nickel
Niobium
Osmium
Palladium
Phosphorus
Platinum

Praseodymium
Particle Size Distribution - Sieving only (75mm - 75µm)
Particle Size Distribution - Hydrometer only (75-20µm, <20-2µm, <2µm (Clay fraction))
Particle Size Distribution - Sieving and Hydrometer (as above)
RTA - Sieving (proportion retained on sieves 0.475, 9.5 & 26.5mm)
Sulphur forms
Acid Volatile Sulphur (AVS)
SEM (Simultaneous Extractable Metals)
Sulphate (SO <sub>4</sub> ) – water soluble
Sulphide (Pres/Abs)
Sulphide - Total (NEPM, B3 section 9.4 - acid soluble and insoluble)
TOS - Total Oxidisable Sulfur
Miscellaneous
MBAS (Surfactants) water soluble
Oxidant Demand (NOD/SOD) includes residual persulfate over 1-4 time periods with buffer capacity
Sugar in soil/concrete
Metals
Aluminium
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Caesium
Cerium

water

Based on your needs and requirements for scientific testing services, our expert team at Envirolab can advise which analysis may best suite your situation

### Speciality Metals

Arsenic - Speciated
Chelex (Bioavailable (Labile) Metals)
Ferrous Iron (Fe <sup>2+</sup> )
Hexavalent Chromium (Cr VI)
Silica - determined as Silicon (acid soluble)
Silica - Reactive (dissolved silica)

### Cations

Cations (Ca, K, Mg, Na)
-------------------------

### Organometallics

Organotins (DBT/TBT/MBT)
Tributyl Tin (TBT)
Methyl Mercury
Organotins Full Suite (DBT/TBT/MBT, MPT, DPT, TPT, MOT, DOT, TOT, TeBT, Tricyclohexlytin)

### Microbiology

Algae - Total Algal ID and Enumeration - Freshwater
Algae - Blue Green ID and Enumeration - Freshwater
Algae - Species Identification - Water or Scum sample
Amoeba (Inc. Naegleria speciation - if required)
Acanthamoebae (35°C)
Bacteria
F. Enterococcus
Total Plate Count
Heterotrophic Plate Count (HPC)
Anaerobic Heterotrophic Plate Count
Total Coliforms

E.coli
Faecal Coliforms
Thermotolerant coliforms
Faecal Enterococci (F Ent.)
Legionella
Pseudomonas aeruginosa (Hydrocarbon Utilising Bacteria)
Clostridium perfringens
Sulphite Reducing Clostridia
Salmonella
Iron Related Bacteria (semi quantitative)
Sulphate Reducing Bacteria (semi-quantitative)
Acid Producing Bacteria (semi-quantitative)
Denitrifying Bacteria (semi-quantitative)

### Miscellaneous

Chlorine (Free)
Chlorine (Total)
Chlorophyll-A
Langelier Saturation Index (LSI)
MBAS (Surfactants)
Odour
Dissolved Organic Carbon (DOC)
Total Organic Carbon (TOC)
Oxyanions - Chlorite, Chlorate, Bromate
Sugar
Tannins & Lignins
Total Carbon (TC)
Total Inorganic Carbon (TIC)







## Organics

<b>Disinfection By-products</b>
HAAs (MCA, DCA and TCA)
Speciated Phenols (ADWG Low Level)
Trichloroacetaldehyde (chloral hydrate)
<b>Dissolved Gases</b>
Acetylene
Butane
Ethane
Ethene
Methane
Propane
<b>Total Recoverable Hydrocarbons (TRH)</b>
vTRH (C6-C9)
TRH - Semi-volatile (C10-C36)
sTRH (C10-C36) with silica gel clean-up
<b>TRH NEPM</b>
TRH NEPM
C6-C10 (Note F1='C6-C10' less BTEX), >C10-C16 (note F2= '>C10-C16' less Naphthalene), >C16-C34, >C34-C40)
sTRH HRAF Aliphatic/Aromatic Speciation
C10-C15 Aliphatic & Aromatic, C16-C35 Aliphatic & Aromatic & >C35 Aliphatic
vTRH CWG Aliphatic/Aromatic Speciation
Aliphatic C5-C6, >C6-C8, >C8-C10 and Aromatic C5-C7, >C7-C9, >C9-C10
sTRH CWG Aliphatic/Aromatic Speciation
C10-C12 Aliphatic & Aromatic, C12-C16 Aliphatic & Aromatic, C16-C21 Aromatic, C21-C35 Aliphatic & C21-C35 Aromatic
TRH (Product ID)- comparison with in-house library
TRH Chromatogram Supply
<b>Volatile Organic Compounds (VOC)</b>
VHC - Volatile Chlorinated (VCH) / Halogenated Hydrocarbons
Formaldehyde + other carbonyls (HPLC)
Formaldehyde (Colourimetric - Total)
VOC - Unknown Qualitative Scan (10 major peaks are library matched)
Vinyl Chloride

<b>BTEX</b>
Benzene
Toluene
Ethyl benzene
m/p-xylene
o-xylene
MtBE (optional as MBTEX)
Naphthalene (optional as BTEXN)
<b>MONOCYCLIC AROMATICS</b>
BTEX (as above)
Styrene (vinyl benzene)
Isopropylbenzene (cumene)
n-propyl benzene
1,3,5-trimethyl benzene
tert-butyl benzene
1,2,4-trimethyl benzene
sec-butyl benzene
4-isopropyl toluene
n-butyl benzene
<b>Trihalomethanes (THM)</b>
Chloroform (trichloromethane)
Bromodichloromethane
Dibromochloromethane
Bromoform (tribromomethane)
<b>HALOGENATED ALIPHATICS</b>
1,1,1,2-tetrachloroethane
1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
1,1,2-trichloroethane
1,1-dichloroethane
1,2-dichloroethane
cis-1,2-dichloroethane
trans-1,2-dichloroethane
Carbon tetrachloride
Dichloromethane (methylene chloride; DCM)
Hexachlorobutadiene (HCBD)
Tetrachloroethene (tetrachloroethylene; perchloroethylene; PCE)
Trichloroethene (trichloroethylene; TCE)
Vinyl chloride (chloroethene, chloroethylene)
Dichlorodifluoromethane (Freon CFC-12)
Chloromethane
Bromomethane (methyl bromide)
Dibromomethane
Chloroethane
Trichlorofluoromethane (Freon CFC-13)
1,1-dichloroethane
Bromochloromethane
1,2-dibromo-3-chloropropane (DBCP)
1,3-dichloropropane
1,2,3-trichloropropane
1,1-dichloropropene

<b>FUMIGANTS</b>
2,2-dichloropropane
1,2-dichloropropane
trans-1,3-dichloropropene
cis-1,3-dichloropropene
1,2-dibromoethane (EDB; ethylene dibromide)
<b>HALOGENATED AROMATICS</b>
Chlorobenzene
Bromobenzene
2-chlorotoluene
4-chlorotoluene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
1,2,3-trichlorobenzene
1,2,4-trichlorobenzene
<b>OXYGENATED COMPOUNDS (Ketones, etc.)</b>
Acetone (2-propanone)
Acrolein (2-propanol)
2-butanone (MEK)
2,6-dimethyl-4-heptanone (Diisobutyl ketone, DIBK)
1,4-Dioxane
2-hexanone (MBK)
4-methyl-2-pentanone (MIBK)
2-nitropropane
Tetrahydrofuran
Vinyl acetate
<b>FUEL OXYGENATES SCREEN</b>
TAAE (tert amyl ethyl ether)
TAME (tert amyl methyl ether)
MtBE (methyl tert butyl ether)
DIPE (diisopropyl ether)
ETBE (ethyl tert butyl ether)
TBA (tert butyl alcohol)
<b>MISCELLANEOUS VOCs</b>
1,1,2-trichlorotrifluoroethane (Freon CFC-113)
Acrylonitrile
Allyl Chloride (3-chloroprene)
Carbon disulfide
Chloroprene (Neoprene, Rubber)
cis-1,4-Dichloro-2-butene
1-Chlorobutane
Iodomethane
Naphthalene
Nitrobenzene
Propionitrile
Hexane
trans-1,4-dichloro-2-butene
Cyclohexane

<b>SOLVENT SCREEN</b>
Benzene
Toluene
Ethylbenzene
m/p xylenes
o-xylene
MTBE
Dichloromethane (methylene chloride; DCM)
Tetrachloroethene (tetrachloroethylene; perchloroethylene; PCE)
2-butanone (MEK)
Carbon Tetrachloride
Trichloroethene (trichloroethylene; TCE)
Carbon Disulphide
Chloroform (trichloromethane)
Diethyl Ether
Acrylonitrile
Methyl Acrylate
Methyl Methacrylate
Ethyl Methacrylate
Methacrylonitrile
Acetone (2-propanone)
Tetrahydrofuran
4-methyl-2-pentanone (MIBK)
Hexane
2-hexanone (MBK)
<b>BROMINATED VOC</b>
Vinyl bromide
Dibromomethane
Trans-1,2-dibromoethene
Cis-1,2-dibromoethene (total)
Bromoform
Tribromoethene
1,1,2,2-Tetrabromoethane
<b>Volatile Fatty Acids</b>
Volatile Fatty Acids (VFAs) - Total
Acetic
Propanoic
Iso-butyric
Butyric
Iso-valeric
Valeric
Iso-caproic
Caproic
Heptanoic



## Semi-Volatile Organic Compounds (SVOC)

SVOC - Standard 8270 suite (>100 analytes as default)
SVOC Extended Suite (>200 analytes)
SVOC - Unknown Qualitative Scan (10 major peaks are library matched)
AFFF Screen (PFOS/ PFOA/6:2FtS)
Aldehydes and Ketones (Carbonyls)
Alcohols (Glycols are separate analysis, see below)
AOX (water leachable)
Coal Tar (note - approximate with high degree of uncertainty)
Cresol/ Coal Tar Creosotes (PAH & Methyl Phenol Package) - by GCMS
Diquat and Paraquat
Diuron and Fluometuron
Explosives
EDTA and NTA
Glutaraldehyde
Glycols (Alcohols are separate analysis, see above)
Glyphosate (Roundup) (& AMPA on request)
Oil and Grease
PFOS/PFOA
Toxaphene
Trenbolone (Steroid)
<b>Carbamates (Herbicides)</b>
Carbofuran
Carbaryl
Molinate

<b>Phenoxy Acid Herbicides</b>
Acifluorfen
2,4,5-T
2,4,5-TP (Silvex)
2,4,6-T
2,4-D
2,4-DB
2,6-D
3,5-dichlorobenzoic acid
Bromoxynil
Clopyralid
DCPA (chlorthal) diacid (does not extract in water)
Dicamba
Dichlorprop
Dinoseb
loxynil
MCPA
MCPB
Mecoprop (MCP)
o-chlorophenoxy acetic acid
4-CPA (p-chlorophenoxy acetic acid)
Picloram
Triclopyr
Bentazon
Chloramben
Fluroxypyr
Dalapon (2,2-DPA)
<b>Sulfonyl Ureas Herbicides</b>
Metsulfuron Methyl
Chlorsulfuron
<b>Triazine Herbicides</b>
Atrazine
Ametryn
Cyanazine
Hexazinone
Irgarol
Metribuzin

Propazine
Prometryn
Simazine
Terbutylazine
Terbutryn
<b>Phenyl Ureas/Carbamate/ Thiocarbamate Herbicides</b>
Methomyl
Aldicarb
Propoxur
Carbofuran
Mexacarbate
Propham
Oxamyl
Fluometuron
Fenuron
Carbaryl
Methiocarb
Tebuthiuron
Chlorpropham
Monuron
SWEP
Isoproturon
Diuron
Linuron
Siduron
Thiobencarb (benthiocarb)
Neburon
Molinate
Vernolate
Pebulate





<b>Organochlorine Pesticides (OCP)</b>
HCB
alpha-BHC (a-BHC)
gamma-BHC (lindane)
beta-BHC (b-BHC)
Heptachlor
delta-BHC (d-BHC)
Aldrin
Heptachlor Epoxide
gamma-Chlordane (g-chlordane, trans-chlordane)
alpha-chlordane (a-chlordane, cis-chordane)
Endosulfan I (a-endosulfan)
p,p'-DDE
Dieldrin
Endrin
p,p'-DDD
Endosulfan II (b-endosulfan)
p,p'-DDT
Endrin aldehyde
Endrin Ketone
Endosulfan Sulphate
Methoxychlor
isodrin
o,p'-DDE
o,p'-DDD
o,p'-DDT
Mirex
trans-nonachlor
<b>Organophosphate Pesticides (OPP)</b>
Azinphos methyl (guthion)
Bromophos Ethyl
Chlorpyrifos (chlorpyrifos ethyl)
Chlorpyrifos-methyl
Coumaphos (Co-Ral)
Diazinon (dimpylate)
Dichlorvos
Dimethoate
Disulfoton
Ethion
Fenamiphos (phenamiphos)
Fenitrothion
Fenthion
Malathion (maldison)
Methidathion
Mevinphos
Parathion (parathion-ethyl)
Parathion-methyl



Phorate
Phosalone
Ronnel (fenchlorphos)
Carbophenothion
cis-Clorfenvinphos
Demeton-S-methyl
EPN
Ethoprophos (ethoprop)
Fensulfothion
Monocrotophos
Naled (dibrom)
Phosmet
Pirimiphos-ethyl
Pirimiphos-methyl
Prothiophos (tokuthion)
Sulprofos (bolstar)
Tetrachlorvinphos (stirophos)
trans-Clorfenvinphos
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>
Naphthalene
Acenaphthylene
Acenaphthene
Fluorene
Phenanthrene
Anthracene
Fluoranthene
Pyrene
Benzo (a) anthracene
Chrysene
Benzo (b,j & k) fluoranthene
Benzo (a) pyrene
Indeno (1,2,3-c,d) pyrene
Dibenzo (a,h) anthracene
Benzo(g,h,i) perylene
2-methyl naphthalene
3-methylcholanthrene
Benzo (e) pyrene
Perylene
Coronene

<b>Polychlorinated Biphenyls (PCB)</b>
Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
PCB Congener 28
PCB Congener 52
PCB Congener 101
PCB Congener 118
PCB Congener 138
PCB Congener 153
PCB Congener 180
<b>PFAS</b>
Perfluorobutane sulfonic acid
Perfluorohexane sulfonic acid
Perfluorooctane sulfonic acid
Perfluorodecane sulfonic acid
Perfluorobutanoic acid
Perfluorohexanoic acid
Perfluoroheptanoic acid
Perfluorooctanoic acid
Perfluorononanoic acid
Perfluorodecanoic acid
Perfluoroundecanoic acid
Perfluorododecanoic acid
Perfluorotridecanoic acid
Perfluorotetradecanoic acid
4:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer sulfonic acid
8:2 Fluorotelomer sulfonic acid
Perfluorooctane sulfonamide
N-Methyl perfluorooctane sulfonamide
N-Ethyl perfluorooctane sulfonamide
N-methyl perfluorooctane sulfonamidoethanol
N-Ethyl perfluorooctane sulfonamidoethanol
Total Oxidisable Precursor Assay



## Total Phenolics (as Phenol)

<b>Speciated Phenols</b>
Phenol
2-Chlorophenol
4-Chloro-3-Methylphenol
2-Methylphenol (o-cresol)
3/4-Methylphenol (m/p-cresol)
2-Nitrophenol
2,4-Dimethylphenol
2,4-Dichlorophenol
2,6-dichlorophenol
2,4,5-trichlorophenol
2,4,6-trichlorophenol
2,4-dinitrophenol
4-nitrophenol
2,3,4,6 - tetrachlorophenol
2-methyl-4,6-dinitrophenol
pentachlorophenol
<b>Extra Vic EPA Phenols:</b>
2,3,4,5 & 2,3,5,6 - tetrachlorophenol
2-cyclohexyl-4,6-dinitrophenol (dinex)
dinoseb
<b>Phthalates</b>
Bis(2-ethylhexyl) phthalate (di-(2-ethylhexylphthalate)) (DEHP)
Diethyl phthalate (DEP)
Dimethyl phthalate (DMP)
di-n-butyl phthalate (DBP)
di-n-octyl phthalate (DOP)
<b>On request only:</b>
Bis(2-ethylhexyl)adipate (di-(2-ethylhexyladipate)) (DEHA)

<b>Semi-volatile chlorinated hydrocarbons (SVCH)</b>
1,2,4,5-Tetrachlorobenzene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Pentachlorobenzene
Pentachloroethane
1,2,3,4-Tetrachlorobenzene
1,2,3,5-Tetrachlorobenzene
1,2,3-Trichlorobenzene
1,3,5-Trichlorobenzene
<b>Synthetic Pyrethroids</b>
Bifenthrin
Lambda-Cyhalothrin
Cyfluthrin
Cypermethrin
Deltamethrin
Esfenvalerate
cis-permethrin
trans-permethrin
<b>Triazole Fungicides</b>
Propiconazole Isomer A
Propiconazole Isomer B
Tebuconazole
<b>Anilines and Amines</b>
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Chloroaniline
4-Nitroaniline
Aniline
Dibenzofuran

<b>Haloethers:</b>
Bis(2-chloroethoxy) methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl) ether
4-bromophenyl phenyl ether
4-chlorophenyl phenyl ether
<b>Nitrosamines:</b>
Diphenylamine
N-Nitrosodi-n-butylamine (NDBA)
N-Nitrosodi-n-propylamine (NDPA)
N-Nitrosomorpholine (NMOR)
N-Nitrosopiperidine (NPIP)
4-Aminobiphenyl
N-Nitrosodiethylamine (NDEA) (N-ethyl-N-nitroso-ethanamine)
N-Nitrosomethyl-ethylamine
N-Nitrosopyrrolidine (NPYR)
<b>Nitroaromatics and Ketones:</b>
1,3-Dinitrobenzene (meta)
2,6-Dinitrotoluene
5-Nitro-o-toluidine
Acetophenone
Azobenzene
Isophorone
Nitrobenzene
Pentachloronitro benzene
Phenacetin
2,4-Dinitrotoluene
p-(Dimethylamino) azobenzene

<b>Miscellaneous SVOC</b>
1,3,5-trinitrobenzene
Bromacil
Demeton-O
Demeton-S
Dicofol
Dinex (2-cyclo-4,6-dinitrophenol)
N-Nitroquinoline-N-oxide
o-Toluidine
Oxychlordane
Temephos (Abate)
Benzyl alcohol
Carbazole
Ethyl methanesulfonate
Isosafrole Isomer 1
Isosafrole Isomer 2
Methapyrilene
p-dimethylaminoazobenzene
Safrole
Methyl methanesulfonate
Alachlor
Metolachlor
e-caprolactam
Trifluralin
Cyclohexanone
2-picoline
<b>Illicit drugs and precursors</b>
Ephedrine
Pseudoephedrine
Amphetamine
Methamphetamine
MDA
MDMA
<b>Radiological</b>
Radiation - Gross Alpha and Beta (K also required for correction)
Radionuclides - Ra 226 and/or 228





## Asbestos

<b>Asbestos Counting</b>	
Asbestos or SMF - Airborne fibres	
Fibre Confirmation by SEM - Filters	
Volume Measurement Training and Equipment Checks as per NATA Requirements	
<b>Asbestos Identification</b>	
Asbestos ID - Soil or Dust	
Asbestos ID - Clay Soil (WA Dept of Health Guidelines )	
Asbestos ID - Sandy Soil (WA Dept of Health Guidelines)	
Asbestos ID - Bulk materials	
Asbestos ID - Tape	
Asbestos ID - Swab	
Asbestos ID - Brake pads (Testing is destructive)	
Asbestos ID - Clutch plates (Testing is destructive)	
Fibre Confirmation by SEM - Bulk samples	

## Dusts / Particulates

<b>DPM</b>	<b>Dust Deposition</b>
Diesel Particulate Matter (DPM) - Elemental carbon only	Dust Deposition Gauges – 5 fractions (Insoluble + soluble+ combustible + ash + total)
Diesel Particulates (DPM) - Elemental carbon and Total carbon	Dust Deposition Gauges – 3 fractions (Insoluble+soluble+total)
Diesel Particulates (DPM) - Elemental carbon, Organic carbon and Total carbon	Dust Deposition Gauges (Total solids only)
<b>Dust</b>	Total Suspended Particles (TSP/HVAS/LVAS)
Inhalable Dust	Supply of Filter - Glass Fibre
Total Welding Fume	Alternatively - Supply of Filter - PVC (if required)
Respirable Dust	Pre-weigh & label
Respirable Dust and Quartz (alpha quartz, silica)	Post-weigh & report
Respirable Quartz or Cristobalite (latter non-NATA)	Total (including supply of Glass Fibre filter):
Respirable Quartz and Cristobalite (latter non-NATA)	Supply of Filter - Teflon (PTFE)
Combustible Dust - Respirable/Inhalable, Oil Mists, Wood Dusts	Pre-weigh & label
Oil Mist, Mineral (as per NIOSH 5026)	Post-weigh & report
	Total (including supply of PTFE filter):



## Inorganics

<b>Acid Mists</b>
Bromide (HBr)
Chloride (HCl)
Sulphate (H2SO4)
Fluoride (HF)
Nitrate (HNO3)
Phosphate (H3PO4)
<b>Ammonia</b>
Ammonia (NH3 as N)
Ammonium Sulphate (dust) - Calculated from Ammonium
<b>Anions - Swab Analysis</b>
Bromide
Chloride
Fluoride
Iodide
Sulphate
Nitrate
Phosphate
<b>Cyanide</b>
Cyanide Free - HCN (form)
Cyanide Particulate (form)
<b>Fluoride</b>
Fluorides - Particulate
Fluorides - Vapour form (HF)
<b>Hydrogen Sulphide (H2S)</b>
Hydrogen Sulphide (H2S)
<b>Iodine</b>
Iodine in Air
Iodine in Swabs
<b>Metalworking Fluids (MWF)</b>
Metalworking Fluids (MWF)
<b>Nitric Oxide and Nitrogen Dioxide</b>
Nitrogen Dioxide (NO2)
Nitric Oxide (NO) (Nitrogen monoxide)
Nitric Oxide (NO) and Nitrogen Dioxide (NO2)
<b>Sulphur Dioxide (SO2)</b>
Sulphur Dioxide (SO2)
Sulphur Dioxide (SO2) and Sulphuric Acid (H2SO4)
<b>Trimellitic Anhydride</b>
Trimellitic Anhydride

work health testing (OHS)



## Metals

<b>Arsine/Arsenic Speciation</b>
Arsine (AsH3) in air
Arsenic speciation in urine (As III, As V, Organic As)
<b>Hexavalent Chromium</b>
Hexavalent Chromium (Cr VI) in air - OSHA
Hexavalent Chromium (Cr VI) in air - NIOSH
Hexavalent Chromium (Cr VI) on wipes

<b>Metals (Filters, Wipes, Paint)</b>
Aluminium - Al
Antimony - Sb
Arsenic - As
Barium - Ba
Beryllium - Be
Boron - B
Cadmium - Cd
Calcium - Ca

Chromium - Cr
Cobalt - Co
Copper - Cu
Gold - Au
Iron - Fe
Lead - Pb
Lithium - Li
Magnesium - Mg
Manganese - Mn
Mercury - Hg <b>particulate only</b>
Mercury - Hg <b>vapour</b>
Molybdenum - Mo
Nickel - Ni
Phosphorous - P
Potassium - K
Selenium - Se
Silicon - Si
Silver - Ag
Sodium - Na
Strontium - Sr

Sulphur - S
Tantalum - Ta
Thallium - Tl
Thorium - Th
Tin - Sn
Titanium - Ti
Tungsten - W
Uranium - U
Vanadium - V
Zinc - Zn
Lead in Paint
<b>Metal Compounds</b>
Metal oxides, metal silicates, etc
<b>Organometallic Compounds</b>
Methyl mercury
Trimethyl lead
Organotins - dibutyltin, diphenyltin, dioctyltin, monobutyltin, monophenyltin, mono-octyltin, tetrabutyltin, tributyltin, tricyclohexyltin

## Illicit drugs and precursors surface swabs

Ephedrine
Pseudoephedrine
Amphetamine
Methamphetamine
MDA
MDMA

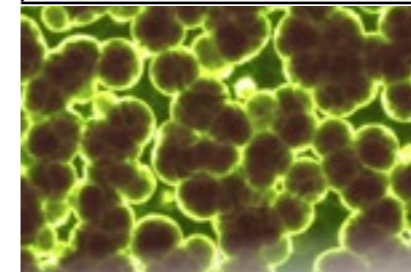


## Urine Testing

Creatinine
Thiocyanate (SCN)
Arsenic - As (Total)
Vanadium - V
Nickel - Ni
Cobalt - Co
Chromium - Cr
Cadmium - Cd
Mercury - Hg
Beryllium - Be
Boron - B
Aluminium - Al
Manganese - Mn
Iron - Fe
Copper - Cu
Zinc - Zn
Selenium - Se
Lead - Pb
Molybdenum - Mo
Silver - Ag
Antimony - Sb
Tin - Sn
Barium - Ba
Thorium - Th
Uranium - U
Arsenic speciation in urine (As III, As V, Organic As)

## Microbiology

Total Airborne Bacteria & Yeasts & Moulds
Total Surface Bacteria & Yeasts & Moulds
Airborne E.coli (including Thermotolerant coliforms)
Airborne Legionella





## Organics

### Alcohols

Alcohols (extras on request)
n-Butanol
Isobutyl alcohol (Isobutanol)
2-ethyl-1-hexanol
Isopropyl alcohol (IPA)
Methanol
Propyl alcohol
Ethanol
Methanol

### Aldehydes & Ketones (Carbonyls)

2,5 - dimethylbenzaldehyde
Acetaldehyde
Acetone/Acrolein
Benzaldehyde
Butanal (Butyraldehyde) /isobutyraldehyde
Crotonaldehyde
Cyclohexanone
Decanal
Formaldehyde
Heptanal

Hexanal (Hexaldehyde)
Isobutyraldehyde
Isovaleraldehyde
m/p-tolualdehyde
Methacrolein
Methyl ethyl ketone (MEK; 2-butanone)/ Methacrolein
Nonanal
Octanal
o-tolualdehyde
Propionaldehyde (Propanal)
Valeraldehyde (Pentanal)

### Glycols

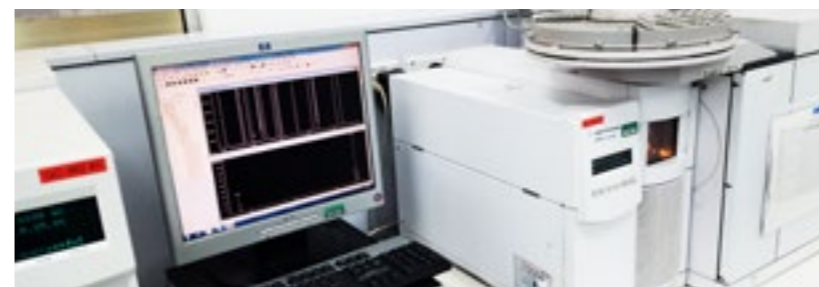
Glycols
Ethylene glycol
Diethylene glycol
Diethylene glycol monoethyl ether (2-(2-ethoxyethoxy)ethanol or Carbitol)
Propylene glycol
Triethylene glycol
(±)1,3-butanediol (1,3-butylene glycol)

### Miscellaneous organics

Asphalt / Bitumen Fumes (can also run PAH's off extract if required - pricing below)
Bisphenol A (BPA)
Carbon disulphide
Coal Tar Pitch Volatile (CTPV) (gravimetric total) (can also run PAH's off extract if required - pricing below)
Formaldehyde
Nicotine
OCP on membrane filters
OCP on sorbent tubes only
OCP on sorbent tubes with PTFE pre-filter for particulate fraction

### PAH on membrane filters

PAH on membrane filters
PAH on sorbent tubes
PAH on sorbent tubes with PTFE pre-filter for particulate fraction
Paraquat/Diquat on filters
PCB's in Oil: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260
PCB's in wipes: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260
Phenols Alkyl (Phenol and methyl phenols)
Speciated Phenols
Phthalates on sorbent tubes
Phthalates on sorbent tubes with an MCE pre-filter



## Organic Vapours - Charcoal tubes/badges - Solvent Elution

### Miscellaneous VOC's

TRH / TVOC's and SVOC's (C6-C9 and C10-C15)
Naphtha (excluding Light Naphtha - C5-<C6), Light Diesel, Petrol, Kerosene, etc., Vapours - Sum of TVOC C6-C9 and SVOC C10-C15

### Organic Vapours

#### Ketones:

Acetone
DIBK (diisobutyl ketone)
MEK (2-butanone)
MIBK (4-methyl-2-pentanone)
MIPK (3-methyl-2-butanone)

#### Cyclohexanone

MtBE (methyl tert butyl ether)

#### BTEX/MAH:

Benzene
Toluene
Ethylbenzene
m/p-Xylenes
o-xylene
MtBE (methyl tert butyl ether)
1,2,4-trimethyl benzene
1,3,5-trimethyl benzene
4-isopropyl toluene
a-methyl styrene
Isopropylbenzene (Cumene)
Naphthalene
n-butyl benzene
n-propyl benzene
sec-butyl benzene
Styrene (Vinyl benzene)
tert-butyl benzene

### Halogenated VOC's (VCH, etc):

1,1,1,2-tetrachloroethane
1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
1,1,2-trichloroethane
1,1-dichloroethane
1,1-dichloroethene
1,1-dichloropropene
1,2,3-trichlorobenzene
1,2,3-trichloropropane
1,2,4-trichlorobenzene
1,2-dibromo-3-chloropropane
1,2-dibromoethane
1,2-dichlorobenzene
1,2-dichloroethane
1,2-dichloropropane
1,3-dichlorobenzene
1,3-dichloropropane
1,4-dichlorobenzene
2,2-dichloropropane
2-chlorotoluene
4-chlorotoluene
Bromobenzene
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dichlorobromomethane)
Bromoform (tribromomethane)
Carbon tetrachloride
Chlorobenzene (Monochlorobenzene)
Chloroform (trichloromethane)
cis-1,2-dichloroethene
cis-1,3-dichloropropene
Dibromochloromethane (Chlorodibromomethane)
Dibromomethane
Hexachlorobutadiene
Tetrachloroethene (PCE, Perchloroethylene)
trans-1,3-dichloropropene
Trichloroethylene (TCE, Trichloroethene)

### Alkanes

Hexane (n-hexane C6)
Heptane (n-heptane C7)
Octane (n-octane C8)
Nonane (n-nonane C9)
Decane (n-decane C10)
Dodecane (n-dodecane C12)

### Jet Fuel Compounds (additional to BTEX):

Cyclohexane
3-methylhexane
Methylcyclohexane

### Paint & Other Industrial Solvents:

Acrylonitrile
n-Butyl acetate
Ethyl acetate
Ethyl acrylate

### High Odour Compounds:

Dimethyldisulphide
Methylcyclopentane
3-methylpentane

### Paint & Other Industrial Solvents:

n-Butyl acrylate
1-chlorobutane
Ethyl methacrylate
Methyl methacrylate
Methyl acrylate

### Miscellaneous Compounds/Solvents:

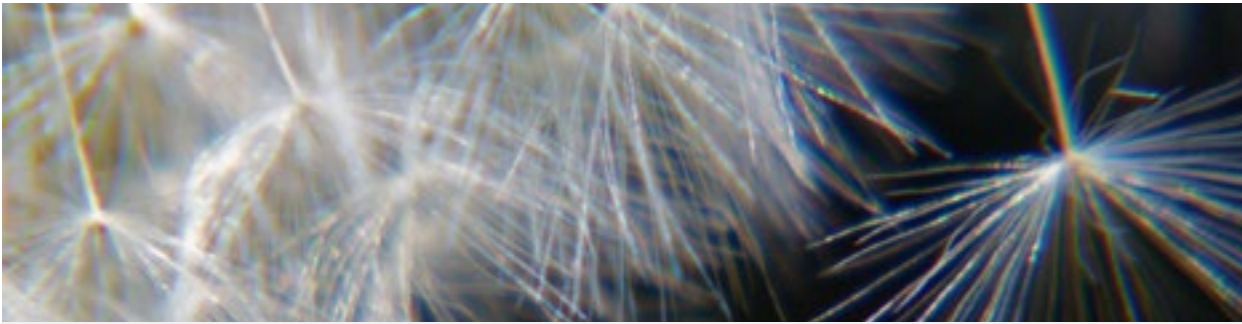
1,4-Dioxane
Benzyl Chloride (α-Chlorotoluene)
Epichlorohydrin
Diethyl ether (ethyl ether)
Propionitrile
cis-1,4-dichlorobutene
trans-1,4-dichlorobutene
Nitrobenzene
Chloroprene (2-chloro-1,3-butadiene, Neoprene Latex/Rubber)
1,1,2-trichlorotrifluoroethane (Freon 113)
Dichloromethane (methylene chloride)
Iodomethane
Acetonitrile

### Gases in Air - Special Suite 5

Vinyl Chloride
Chloroethane
Dichlorofluoromethane
Trichlorofluoromethane
Bromomethane/Chloromethane

**Additional VOC's on request (please contact the laboratory)**





## Organics - Gases, Vapours and Solvents

H2 - Hydrogen
O2 - Oxygen
N2 - Nitrogen
CH4 - Methane
CO - Carbon Monoxide
CO2 - Carbon Dioxide
He - Helium
Ethane, Butane
Hydrocarbon speciation (C1-C6 & >C6)



## VOC - Whole Air Thermal Desorption Tubes, Summa Canisters or Tedlar Bags

VOC's in air USEPA TO15 or TO17 or m18
1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
1,1,2-trichloroethane
1,1-dichloroethane
1,1-dichloroethene
1,2,4-trichlorobenzene
1,2,4-trimethylbenzene
1,2-dibromoethane
1,2-dichlorobenzene
1,2-dichloroethane
1,2-dichloropropane
1,3,5-trimethylbenzene
1,3-butadiene
1,3-dichlorobenzene
1,4-dichlorobenzene
1,4-dioxane
4-ethyl toluene
acetone* (on request)
acrolein
benzene
benzyl chloride
bromodichloromethane
bromoform

bromomethane
carbon disulfide
carbon tetrachloride
chlorobenzene
chloroethane
chloroform
chloromethane
cis-1,2-dichloroethene
cis-1,3-dichloropropene
cyclohexane
dibromochloromethane
dichlorodifluoromethane (freon-12)
ethanol
ethyl acetate
ethyl benzene
freon-113
freon-114
heptane
hexachlorobutadiene
hexane
isopropyl alcohol
m/p-xylene
methyl butyl ketone(MBK)
methyl ethyl ketone (MEK)

methyl isobutyl ketone (MIBK)
methyl methacrylate
methyl tert butyl ether (MTBE)
methylene chloride (dichloromethane DCM)
naphthalene
o-xylene
propylene
styrene
tetrachloroethene
tetrahydrofuran
toluene
trans -1,3-dichloropropene
trans-1,2-dichloroethene
trichloroethene
tri chlorofluoromethane (freon-11)
vinyl acetate
vinyl chloride
1,1,1,2 - tetrachloroethane
1,1- dichloropropene
1,2,3 - Trichlorobenzene

1,2,3- trichloropropane
1,2-dibromo- 3-c hloropropane
1,3 - dichloropropane
2,2 - dichloropropane
2 - chlorotoluene
4-chlorotoluene
4 - isopropyltoluene
bromobenzene
dibromomethane
isopropylbenzene
n-butylbenzene
n-propylbenzene
sec-butylbenzene
tert-butylbenzene



air quality and soil vapour

<b>Ozone Precursors</b>
1,2,3-trimethylbenzene
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
1-butene
1-hexene
1-pentene
2,2,4-trimethylpentane
2,2-dimethylbutane
2,3,4-trimethylpentane
2,3-dimethylbutane
2,3-dimethylpentane
2,4-dimethylpentane
2-methylheptane
2-methylhexane
2-methylpentane
3-methylheptane
3-methylhexane
3-methylpentane
4-ethyl toluene
Benzene
cis-2-butene
cis-2-pentene
Cyclohexane
cyclopentane
Ethyl Benzene
Heptane
Hexane
iso-butane
iso-pentane
iso-prene (2-methyl-1,3-butadiene)
isopropylbenzene
m/p-xylene
m-diethylbenzene
methylcyclohexane
methylcyclopentane
m-ethyltoluene
n-butane
n-decane
n-dodecane
n-octane
nonane
n-pentane
n-propylbenzene
n-undecane
o-ethyltoluene
o-xylene
p-diethylbenzene
propane
propylene

Styrene
Toluene
trans-2-butene
trans-2-pentene
TPH various bands/ Air Phase Hydrocarbons (Non-methane Hydrocarbons)
C5-C8 aliphatics
C9-C12 aliphatics
C9-C10 aromatics
#other fractions C5-12 available, contact the laboratory
<b>Sulphur Speciation</b>
H2S, COS, MeSH, EtSH, Me2S (CS2 is part of VOC's by TO15)
<b>Fixed gases</b>
Methane
Ethane
Ethylene
Propane
Propylene
iso-Butane
n- Butane
1,2-Propadiene
Acetylene
trans-2-Butene
1-Butene
i-Butylene
cis-2-Butene

iso-Pentane
n-Pentane
1,3-butadiene
Methyl acetylene
trans-2-Pentene
1-Pentene
2-Methyl-2-Butene
cis-2-Pentene
Carbon Dioxide
n-Hexane (C6+) Hexane isomers
Oxygen
Nitrogen (note N2 and He cannot be reported together)
Carbon monoxide
Helium (note N2 and He cannot be reported together)
Hydrogen--
<b>Dioxins and Furans (PCDD/Fs)</b>
Dioxins and Furans (PCDD/Fs)
PAHs
PCDD/Fs + PAHs combined
<b>Other</b>
Fluorides (Gaseous & Acid Soluble Particulates)
Formaldehyde in air
Hydrocarbon speciation (C1-C6 & >C6)
PAH in PUF (double price if PUF + Filter needs analysis)
TVOC as Toluene in bags



Envirolab has specialist expertise in assessing VOCs under the following test methods:

- ✓ VOCs in landfill gas and stack emissions by USEPA Method 18
- ✓ VOCs in ambient air collected on thermal desorption tubes, USEPA TO17
- ✓ VOCs in ambient air collected in Summa Canisters, USEPA TO15



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