



HOSKIN

SCIENTIFIC

HYDROCARBON CONTAMINATION

AND REMEDIATION
IN WATER AND SOILS



hoskin.ca

Supplying Testing & Monitoring Instruments Since 1946

ABOUT HOSKIN

For over seventy years, Hoskin Scientific has been a supplier of testing and monitoring instrumentation to the Canadian market. With offices in Vancouver, Edmonton, Oakville and Montréal our customers are able to receive local sales and technical support in our three major departments.

Our Environmental Department provides solutions for monitoring and sampling biological and chemical parameters in the environment. Our team of environmental sales representatives and diverse product range guarantee that you will find the right products for your application. Specific areas include: water quality, water quantity, soil moisture, plant science, weather stations, indoor air quality, aquatic sampling, and oceanography.

Our Materials Testing Department offers testing equipment for soil, asphalt, petroleum, concrete and cement. Our qualified sales associates focus on providing a sophisticated range of testing equipment complying with the various test methods, ensuring that accurate and consistent test results are always obtained.

Our Instrumentation Department focuses on a wide range of products including optical camera systems, transducers and transmitters, data acquisitions and loggers, signal conditioners and indicators, automation sensors and measurement systems. We have technical sales associates that are trained in various areas and willing to help you with your instrumentation requirements.

RENTALS

We offer high quality, proven equipment that will provide the user with valuable data as well as numerous ways of retrieving, filtering and viewing that data. We carry a wide range of instrumentation, including: water quality, portable gas monitors, soil sampling instruments and more.

Rental Equipment:

- Single and multi-parameter instruments that can be setup for spot checks or extended deployment/data logging
- Water sampling instruments
- Water velocity and stream profiling instruments
- Soil sampling instruments
- Soil vapour sampling instruments
- Portable gas monitoring instruments

Customer satisfaction is our goal and we make an effort to ensure that all our customers are satisfied with their rental. All rental instruments are cleaned and calibrated before being sent to the user (please note that we also require equipment to be returned clean). If a rental instrument requires recalibration, please return the instrument to us and we will recalibrate at no charge. Any instrument not functioning properly can be exchanged at no cost.

Hoskin Scientific offers technical support over the phone and can also provide hands on demonstrations.

We are constantly expanding and looking for new equipment to add to the rental inventory and welcome all suggestions.

Check our website www.hoskin.ca for current offerings.

Daily, weekly and monthly rental rates available – please call for a quote.

WATER

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Filter Bucket™ Empty and Full

Geotech Filter Bucket™ Passive Hydrocarbon Recovery Skimmer

The Geotech Filter Bucket™ is an independently floating passive hydrocarbon recovery skimmer that is equipped with a visual alarm to indicate when the bucket is full. The heart of the system is a floating cartridge that recovers product for storage in an integral 2-liter reservoir. Actual separation of product from water is carried out by a mesh screen located in the cartridge. This screen is specially treated to pass oil and repel water.

Geotech PRC Passive Skimmer

The Geotech PRC (Product Recovery Canister) is a passive skimmer with a floating intake that separates and recovers light hydrocarbons from ground water. The Geotech PRC collects floating product down to a sheen then is emptied through a discharge valve at the bottom of the canister after being raised to the surface.

- Oleophilic / Hydrophobic filter buoy recovers
- Product without taking in water
- Quick fill time – about 15 minutes with ample product
- Protected easy release drain valve
- Able to convert to active recovery systems

2" PRC

- 12" (30.5cm) effective buoy travel
- 3 recovery capacities: .25, .5 and 1 liter
- Transparent recovery canister
- 2" (5cm) or larger monitoring well applications
- Protective screen versions

4" PRC

- 16" (40.6cm) effective buoy travel
- 3 recovery capacities: 1, 3 and 4 liter
- 4" (10cm) or larger monitoring well applications
- Buoy protected in 0.020 (.5mm) slot PVC screen



Geotech Small Diameter Filter Scavenger™



The Geotech Small Diameter Filter Scavenger™ is an active hydrocarbon recovery system capable of recovering a wide range of floating hydrocarbons from groundwater. The system is designed to fit into a 4" (10cm) well or larger.

- Unique design makes product recovery more efficient than total fluids or dual phase extraction
- Ideal for wells with static fluid levels down to 150' (46m) deep
- Operates reliably in fluctuating water levels
- Uses oleophilic/hydrophobic membrane to separate and recover oil from water table down hole
- 100% portable for use well to well or site to site
- Highly efficient water-free product recovery
- Custom applications available to meet your site specific conditions
- Fully automated operation
- Complemented results with use of water table depression pump
- Explosion proof controls available for use in hazardous environments (Class I, Div 1)



Geotech SpOILER Product Recovery System

The SpOILER is an efficient “controllerless” product recovery system designed to recover floating hydrocarbons from 2" and larger wells and sumps. The SpOILER utilizes an internally regulated pneumatic bladder pump combined with a floating skimmer attachment. This system tracks water level fluctuations in excess of 24" (4" skimmer) while removing product to a sheen. This system is extremely flexible for use at a variety of sites, with skimmers available to recover product ranging from gasoline to gear oil over several available travel ranges.

- No external controller required
- Has a field adjustable cycle timer to optimize cycle rates and conserve energy
- High efficiency, ultra low energy use
- Quick set-up; only two lines to connect
- Different sizes/types of skimmers can be used with the standard pump for varying site conditions, including screened skimmers for extra protection
- Optional Tankfull Shut-Off and oil-less air compressor

H.OIL Standard Oil/Water Interface Meter

The Heron H.OIL interface meter is used to measure the thickness of floating or sinking hydrocarbon products in groundwater accurately, reliably, safely & economically. The easy to read accurate (ASME standard) heavy duty Kynar® jacketed tape is accurate to 1/100 ft per 100 feet. You can measure with confidence to 1/200 ft (1mm).

For dependable field use, it features an environmentally protected encapsulated circuit for safety and durability on an easily removable modular electronic panel. The field changeable probe makes your job more efficient.



Sm.OIL Mini Oil/Water Interface Meter

The unit may only weigh 4.24lbs but it packs a huge amount of function into a small frame. It will measure to 60ft (20m) below the top of the well, perfect for shallow wells or high water tables. The SM.OIL interface meter measures the thickness of floating (LNAPL) or sinking (DNAPL) layers of hydrocarbon products in the groundwater. Many of these instruments are used in refineries and by oil spill and remediation companies, landfills and site clean-up projects.



Hydrocarbon Recovery EcoBailer



The Waterra Clear PVC Hydrocarbon Recovery EcoBailer is an eco-friendly product that is designed to help you remove the L.N.A.P.L, floating hydrocarbon product from your monitoring wells without removing water as well. The Hydrocarbon Recovery EcoBailer uses a specially designed ball which floats in water but sinks in hydrocarbons. The Hydrocarbon Recovery EcoBailer is made from the same durable, rigid PVC as the regular Waterra Clear PVC EcoBailer and so has all the same great qualities.

- Available in 1.5" diameter X 3' length
- Faster sinking than polyethylene bailers
- Clear tube allows sample inspection within the bailer
- Requires less material to produce, resulting in less waste and cost to the environment
- Captures only hydrocarbons, not water

Hanby TPH (Total Petroleum Hydrocarbon) Water Test Kit

Field Portable Colourometric Test Kits for the identification of Aromatic Hydrocarbon contaminant and the PPM Concentration of that contaminant.

Colour of the extract solution indicates the type of compound. The intensity of the colour indicates its concentration.

- Soil Samples take four minutes and water samples take six minutes
- Easy to use - only 8 steps
- Accurate results in PPM
- Broad range of petroleum related Chemicals



10AU Field Fluorometer

The 10AU™ Field Fluorometer is a rugged, field-portable instrument that can be set up for continuous-flow monitoring or discrete sample analyses. Measurements are extremely stable with stability measured in months or weeks as opposed to days or hours. Watertight filter paddles enable quick change of excitation and emission filters so a variety of compounds can be easily measured on-site. A watertight case, internal data logging, automatic range changing, watertight quick-change filter paddles, and unmatched stability make the 10-AU the instrument of choice for field studies.

Optical kits with appropriate filters and lamps are available for a wide range of applications and can be easily installed in the field or lab. Individual filters and lamps can also be purchased for customized applications.

- Exceptional Sensitivity
- Automatic or Manual Ranging
- Analog and Digital Output
- Field Installable Optical Kits
- Easy to Read LCD Display
- Flexible Sample Compartment
- Stable measurements



C3™ Submersible Fluorometer

The C3™ Submersible Fluorometer can be configured with one, two or three optical sensors ranging from the deep ultraviolet to the infrared spectrum. Internal memory storage capacity combined with an external submersible lithium ion battery allows the C3™ to run during extended or short-term deployments. Each C3™ comes with a factory-installed temperature sensor. Optional factory-installed depth sensors and mechanical wipers are also available. The durable delrin housing is highly resistant to harsh environments. Antifouling copper tape pieces are included for placement on the C3™ optical head to reduce bio-fouling on and around the sensors. C-Soft Windows™ based software allows for intuitive calibration, datalogging set-up and file management capabilities as well as digital or analog data integration.



- All Plastic Housing
- Robust Memory – Over 64,000 Data Lines!
- Easy to Use Software with Data Management Capabilities
- Optional C-Ray Enables Horizontal Towing
- C-FINS Integration with ArcGIS
- Integrate with VideoRay Pro 4 Submersible ROV

Cyclops-7 Submersible Logger, Sensors and Explorer

The CYCLOPS-7™ line of analogue submersible sensors from Turner Design offers users flexibility, ease of integration and precision. Available for parameters such as crude oil and refined fuels, CYCLOPS-7™ sensors can be connected to a variety of monitoring or datalogging platforms. The CYCLOPS-7™ combination of price, performance and size makes these fluorometric sensors very attractive for remediation applications.

The following products can be connected to the CYCLOPS-7™ sensors for added versatility in different monitoring applications.



- Available sensors:**
- Refined fuels
 - Crude Oil
 - Turbidity
 - Tryptophan
 - CDOM/FDOM
 - Chlorophyll in vivo
 - Fluorescein Dye
 - Optical Brighteners
 - Phycocyanin
 - Phycocyanin
 - PTSA Dye
 - Rhodamine Dye
 - *custom optics available

The Stand Alone Unit: The Cyclops-7 Submersible Logger

The submersible logger integrates a Cyclops 7 sensor into a self-contained waterproof unit with a diameter small enough to fit into bore holes and other tight spaces. Robust and reliable, six internal AA lithium batteries are enough to power the unit for up to a year. The logger records measurements to an internal SD card at a variety of possible sampling rates. The removable SD card makes data retrieval intuitive and simple.



Portable Lab Use: The Cyclops Explorer

The Cyclops Explorer is a handy tool when using Cyclops-7 or Cyclops-6K Submersible Sensors in a laboratory setting. Plugging directly into the USB port on a computer, the Explorer uses a simple to use interface to analyze samples collected in the field, determine limits of detection, or check instrument stability before deployment or use.



- Available sensors:**
- CDOM/FDOM
 - Chlorophyll in vivo
 - Fluorescein Dye
 - Crude Oil
 - Refined fuels
 - Optical Brighteners
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 - PTSA Dye
 - Rhodamine Dye
 - Tryptophan
 - Turbidity
 - *custom optics available

C6™ Multi-Sensor Platform

The C6™ Multi-Sensor Platform integrates up to six Cyclops-7™ fluorescence and turbidity sensors for extended or short-term deployments. The C6™ provides individual automatic gain control, calibration, digital data reporting and datalogging for each Cyclops-7™ sensor. Each C6 comes with factory-installed temperature and pressure sensors. C-Soft Windows™ based user interface allows for intuitive calibration, datalogging set up, and file downloading. Existing Cyclops-7™ users can easily install their sensors onto the C6™ Multi-Sensor Platform.



WATER DETECTION

Trilogy® Laboratory Fluorometer

The Trilogy® is a compact benchtop laboratory instrument for making fluorescence, absorbance and turbidity measurements. Collected field samples can be measured with a variety of interchangeable snap-in filter modules. Flexible, precise and easy to use, the Trilogy easily grows and changes with client applications.



- Dye tracing: Fluorescein, PTSA, Rhodamine WT
- Water contamination: Nitrate (Absorbance), Oil – Crude, Oil – Refined, Phosphate (Absorbance), Turbidity, Quinine Sulfate
- Water Quality: Ammonium, Chl a Extracted – Acidification, Chl a Extracted - Non-Acidification, Chl in vivo, Nitrate (Absorbance), Phosphate (Absorbance), Phycoerythrin, Silicate (Absorbance), Turbidity, * Quinine Sulfate
- Waste Water management/Industrial: Ammonium, Histamine, Oil – Refined, Oil-Crude, Optical Brighteners, Phosphate (Absorbance), Turbidity

SOIL REMEDIATION

Soil Vapor Extraction Systems (SVE)

The Geotech SVE system works by pulling air through soil that has been saturated with hydrocarbons or other volatile organic compounds, causing these compounds to volatilize. The vapors are then discharged to the atmosphere, through carbon polishing or vapor oxidation.

These systems are deployed with a moisture separator and mist eliminator filter to protect blower and end treatment from corrosion particulates and debris.

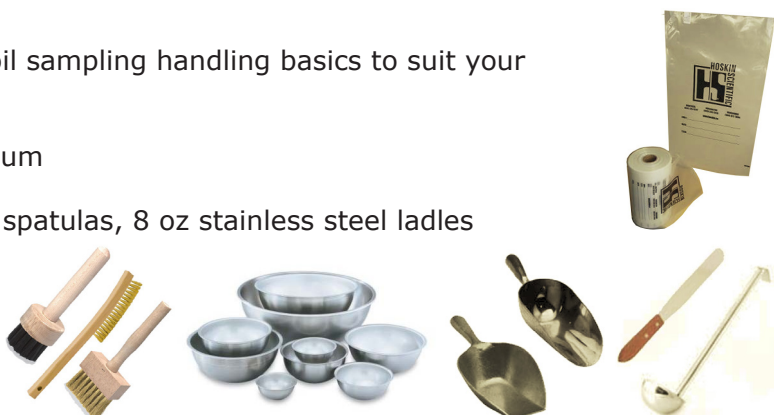
- Compact, durable design
- Skid Mounted with moisture separator drum/mist eliminator
- 37 gallon (140 liters) liquid holding capacity
- Hi Water level switch
- Hi Vacuum switch
- Continuous reliable operation
- Many blower types are available to meet your requirements
- Thermal overload protection
- Influent dilution air valve
- Two vacuum gauges
- Optional NEC code available (Class 1, Div. 1, or Div. 2)
- Non-explosive units are available



Soil Sampling Accessories

Hoskin Scientific carries a wide variety of soil sampling handling basics to suit your needs.

- Sample bags - 18 x 31", 200/roll
- Sample tins - 3 to 8 oz, tin and aluminum
- Brushes - coarse, fine, brass, nylon
- Spatulas, ladles and spoons - 4 to 12" spatulas, 8 oz stainless steel ladles
- Pans and bowls - 5 to 13 quart, moisture and immersion pans
- Sampling pans - stainless steel,



One-Piece Hand Augers

Hand auger equipment is extremely suitable for soil research.

As almost any type of soil sets its own demands where it concerns the model of the auger to be applied. In the course of the years many models have been developed. Years of experience and many contacts with soil researchers at home and abroad made it possible to achieve the optimum design for various types.

- Made from durable steel, one-piece augers stand up to punishment
- Easy to carry in the field and work well with all types of soil
- One-piece crossbar handle is welded to the steel shaft
- Works best at depths up to 3 ft.

	Auger Type	Product Number
	Single edelman auger, clay type, Ø 7 cm	E-365-010101071
	Single edelman auger, comb. type, Ø 7 cm	E-365-010102071
	Single edelman auger, sand type, Ø 7 cm	E-365-010103071
	Single edelman auger, coarse sand type, Ø 7 cm	E-365-010104071
	Single riverside auger, Ø 7 cm	E-365-010300071
	Single auger for stony soil, Ø 7 cm	E-365-010500071
	Single spiral auger, Ø 4 cm	E-365-010700041

Eagle 2 - 6 Gas Sample Drawing Monitor

The next generation of the popular EAGLE portable gas detector. Equipped with features that are not available on competitive units, the EAGLE 2 is a powerful instrument that does more than just offer the standard confined space protection for LEL, O₂, H₂S and CO.

The EAGLE 2 available features include a PID sensor for detecting high or low ppm levels (0-50 & 0-2,000) of VOC gases; % volume capability for CH₄ and H₂ using a TC (thermal conductivity) sensor; ppm or LEL hydrocarbon detection at the push of a button; infrared sensors for CO₂ (ppm or % volume), methane or hydrocarbons in LEL and % volume ranges; Optional LEL / ppm H₂ specific sensor, methane elimination feature for environmental applications; and a variety of super toxic gases.



MiniRAE 3000 Volatile Organic Compound (VOC) Monitor

Whether for industrial hygiene, leak detection, or HazMat response, the MiniRAE 3000 delivers the most advanced VOC monitoring capabilities on the market. With a photoionization detector (PID) that has an extended detection range from 0-15,000 ppm, a rapid three-second response time, built-in correction factors for more than 200 compounds, and patented auto-cleaning sensor technology, the MiniRAE 3000 can measure more chemicals faster and more accurately than any other PID available.

The powerful sample pump draws through up to 100 feet of tubing horizontally or vertically. And the optional built-in Bluetooth communicator can relay real-time instrument readings and alarm status up to 2 miles to a RAELink3 wireless transmitter or command center. A built-in flashlight to help navigate in darker environments and an IP 65/67 dust-tight and water-proof housing all add up to a device that performs reliably even in harsh conditions.



Hanby TPH (Total Petroleum Hydrocarbon) Soil Test Kit

Field Portable Colourometric Test Kits for the identification of Aromatic Hydrocarbon contaminant and the PPM Concentration of that contaminant. Colour of the extract solution indicates the type of compound. The intensity of the colour indicates its concentration.

- Soil Samples take four minutes
- Water samples take six minutes.
- Easy to use - only 8 steps
- Accurate: Results in PPM
- Broad range of petroleum related chemicals



Vapor Pin™

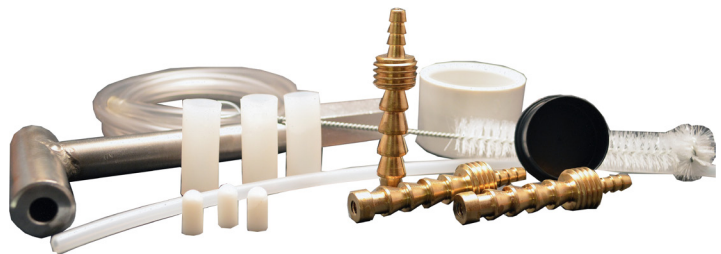
The Vapor Pin™ has a variety of applications, including but not limited to: Sub-slab soil gas sampling, de-pressurization studies/testing, stray gas evaluations, source area characterization and mitigation progress monitoring.

Advantages of the Vapor Pin™ over traditional methods include:

- Unique patented design reduces the potential for leaks during sample collection, improving sample quality
- Built-in disposable seal eliminates the need for grout, increasing productivity;
- Connects easily to sampling equipment;
- Easily installed, sampled, and retrieved for reuse;
- Reduces damage to the slab;
- Improves diagnostic testing;
- Improves spatial resolution;
- Reduces sampling time allowing collection of more samples for less cost, and thus provides a better understanding of site conditions.

Products can be purchased individually or a part of a complete set

- Individual stainless steel or brass Vapor Pin™
- Stainless steel drilling guide
- Stainless steel secured cover
- Tubing (Nylaflow or Tygon)
- Silicone sleeves
- Water dam
- Installation/Extraction Tool
- Spanner for Secured Cover
- Bottle brush



Gas Vapour Probe Kits

Excellent for monitoring and sampling hydrocarbon spill sites, underground storage tanks and pipelines.

AMS GVP kits use an AMS slide hammer or an electric rotary drive hammer and GVP drive extensions to insert a stainless steel GVP tip to the desired sampling depth. Fluoropolymer tubing is attached to a barb fitting on the GVP tip for remote sampling from the surface. Two GVP tips are available for use with AMS GVP kits - dedicated gas vapour tips and the AMS Retract-A-Tip.

Includes:

- 10 GVP dedicated tips with umbrella
- Retract-A-Tip (included with Retract-A-Tip kit options only)
- 1 ½" wild bore bit
- 5/8" tip drive end
- 4 - 3' GVP 5/8" extensions
- 5/8" x 3' heavy-duty extendable tile probe base
- 3 - 5/8" x 3' heavy-duty tile probe extension
- external drive adapter ¾" ID
- SDS-Max drill adapter
- SDS-Max 1 ½" carbide bit
- slide hammer
- slide hammer adapter ¾" OD
- hand pump
- 3/16" ID x ¼" OD x 250' fluoropolymer tubing
- removal jack AMS deluxe carrying case
- AMS GVP manual, GVP instruction DVD video



Hoskin Scientific Limited has been supplying testing and monitoring instruments since 1946. Although our range is broad, we focus on three major markets including:

Geotechnical & Materials Testing
Environmental Monitoring
Test & Measurement Instrumentation

Hoskin Scientific operates out of four offices within Canada:

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