

Limnology

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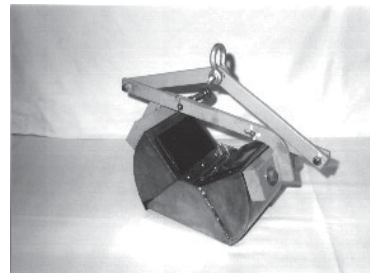
Limnology Equipment

As producers of limnology equipment, we manufacture our equipment and instruments to exacting standards to ensure field durability. We are certain you will be impressed with the hand-crafted workmanship that goes into each and every one of our benthic samplers and bottom grabs.

LIGHTWEIGHT GRAB SAMPLER

For use in light boats and canoes, or in soft substrates, a lightweight version of this grab sampler is available in both the 6" x 6" and 9" x 9" sizes. The lightweight grabs utilize 1/8" stainless steel plate versus the 1/4" plate on the heavyweight grabs. The weight and control arms are also fabricated from lighter material than used in the heavyweight grab, and are also powder painted for corrosion resistance.

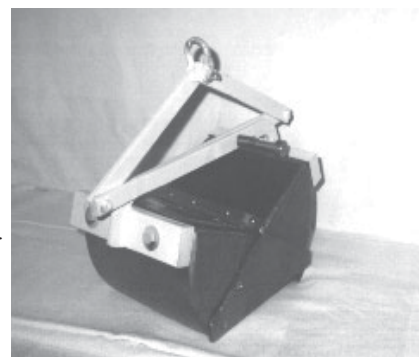
#771260601	6" x 6" (15cm x 15cm) (22lbs)	\$595.00
#771290901	9" x 9" (23cm x 23cm) (30lbs)	\$795.00



HEAVYWEIGHT GRAB SAMPLER

The proven design of the heavyweight grab sampler facilitates its use in all types of bottom substrates, except hard-packed clays. A simple pin mechanism prevents accidental closure of the dredge while in transit. The *new improved* spring-loaded release mechanism triggers the dredge upon impact with the bottom. The top of the dredge is covered with #30 stainless steel screening to reduce the frontal shock wave and prevent the escape of the sample upon retrieval. The simplicity of its design and the rugged stainless steel jaw construction will ensure the dependability of the dredge for many years. The weights and control arms of the dredge are powder painted for corrosion resistance. The heavyweight grab sampler is available in two standard sizes:

#771260602	6" x 6" (15cm x 15cm) (28lbs)	\$795.00
#771260603	6" x 6" (15cm x 15cm) (28lbs) All Stainless Steel	\$990.00
#771290902	9" x 9" (23cm x 23cm) (40lbs)	\$1295.00
#771290903	9" x 9" (23cm x 23cm) (40lbs) All Stainless Steel	\$1475.00



HALLTECH 9X9 SUPER HEAVYWEIGHT OCEAN GRAB SAMPLER

This solid stainless steel sampler is the bigger, badder brother of the heavyweights above. It features our new *removable screen plates* allowing access to the sediment without opening the jaws. Great for the removal of benthic organisms in their natural horizon, or simply to facilitate visual inspection.

#771290903OD	9" x 9" (23cm x 23cm)(44lbs) All Stainless Steel	Contact Us
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EKMAN DREDGE

This dredge is useful for sampling benthic communities inhabiting soft bottomed aquatic environments. As the dredge is lowered, the hinged upper doors swing open, allowing water to pass through and minimize the shock wave. When the dredge reaches the bottom, a messenger is sent down the line which trips the spring-loaded jaws. The jaws snap shut, preventing washout of the sample. Our dredges are constructed of stainless steel with special Heliarc welding for extra strength and trouble-free life. A simple cable release system with convenient bar grip enables the operator to set the dredge with greater safety. The Ekman Dredge comes complete with a stainless steel messenger and 50ft (15.24m) of line and carrying case.

#7710606	6" x 6" x 6" Ekman Dredge	\$575.00
#7710609	6" x 6" x 9" Ekman Dredge	\$620.00
#7710909	9" x 9" x 9" Ekman Dredge	\$760.00
#77100205	5ft. handle for the Ekman Dredge	\$310.00
#7710-03	Carrying Case for all Ekman Dredges	\$55.00
#77937	300 gram Solid Stainless Steel Messenger	\$70.00



Limnology Equipment Cont.

Mackie Benthic Sieve Box

Based on the design of Dr. Gerry Mackie. This lightweight floating sieve works great over the side of a small boat. Simply lift your dredge out of the water and over the screen as it floats on the surface. This allows the use of both hands in emptying the dredge.

500 Micron

9" x 9" x 12", 3 lbs

CUSTOM SIZE BOXES ALSO AVAILABLE

#83295 Mackie Benthic Sieve Box \$210.00



WASH FRAME

The wash frame provides an efficient and convenient method of washing samples taken by grab samplers and dredges. Cross bars support the sampler while protecting the screen from damage. The frame is constructed of heavy gauge stainless steel and will retain particles larger than 583 microns.

#771015 Wash Frame - 14"x20"x4" \$385.00

SCREEN PAIL

The screen pail is used to separate macro invertebrates from bottom sediment, is constructed of plastic and is fitted with 500 micron mesh stainless steel screen bottom. Other mesh sizes are available upon request.

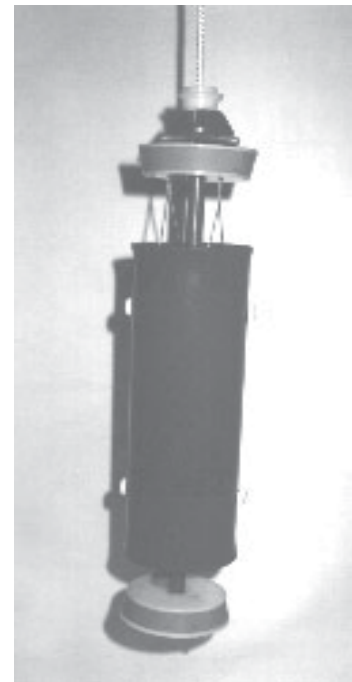
#771012 Screen Pail \$150.00



KEMMERER WATER SAMPLER

This Kemmerer bottle has the virtues of simplicity of construction, convenience, small bulk, light weight, and modest cost. The body of the sampler can be made of clear acrylic, lexan, or P.V.C., and the metal parts are machined from stainless steel. In operation, the open sampler is lowered on a graduated rope to the desired depth. The Kemmerer design assures complete flushing of the bottle as it is lowered. The bottle is closed by means of a messenger and the sample is brought to the surface in a strictly unmodified condition. Samples can be drawn off by means of a drain in the lower stopper. The stopper is made from plastic with a silicone rubber band to ensure better sealing. The new trip-head features: positive locking, sure-fire release in every position, and a lighter messenger for longer life. All water samplers can be made of non-metallic components for trace metal sampling (add \$60.00). Line, messengers and cases are also available.

#77141201	1200 mL. sampler - clear acrylic	\$555.00
#77142001	2000 mL. sampler - clear acrylic.	\$605.00
#77144001	4000 mL. sampler - clear acrylic.	\$640.00
#77146001	6000 mL. sampler - clear acrylic.	\$729.00
#77151201	1200 mL. sampler -PVC	\$495.00
#77152001	2000 mL. sampler -PVC	\$550.00
#77154001	4000 mL. sampler -PVC	\$625.00
#77156001	6000 mL. sampler -PVC	\$685.00
#77937	300 gram Solid Stainless Steel Messenger	\$65.00
#771803	Polyethylene Water Sampler Cases (vary in Size)	\$39.00-\$95.00

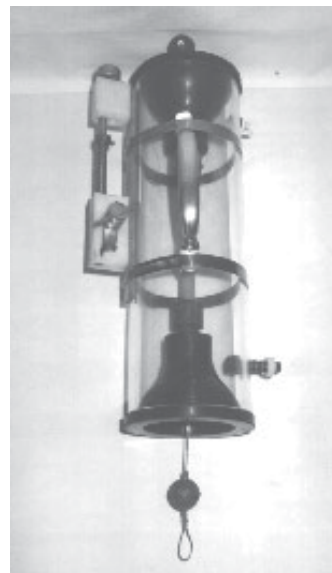


CALL TO CONFIRM PRICING ON LEXAN KEMMERER BOTTLES.

VERTICAL VAN DORN BOTTLE

Our vertical Van Dorn bottle is non-metallic, based on the design of Dr. W. G. Van Dorn of the Scripps Institute of Oceanography and is suited for either saline or freshwater usage. The body and drain valves are constructed of durable lexan, P.V.C. plastic or clear acrylic. Closure of the bottle is by means of a messenger from the surface releasing the tension on a latex band and thus pulling the two stoppers firmly into place. The Van Dorn bottles are available in many sizes and can be ordered with a strong carrying case. The vertical units can be adopted for multi-unit sampling, upon request. Non-metallic Van Dorn bottles are available for trace metal sampling, featuring P.V.C. end cups with silicone seals. The regular Van Dorn bottle has neoprene end cups. Line, messengers and cases are also available for all Van Dorn bottles.

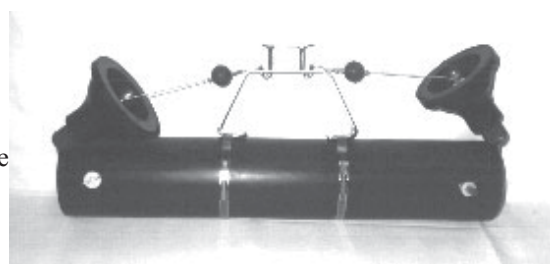
#77162001	2000 mL. sampler - clear acrylic	\$530.00
#77164001	4000 mL. sampler - clear acrylic	\$610.00
#77166001	6000 mL. sampler - clear acrylic	\$695.00
#77172001	2000 mL. sampler - PVC	\$510.00
#77174001	4000 mL. sampler - PVC	\$585.00
#77176001	6000 mL. sampler - PVC	\$665.00
#77937	300 gram Solid Stainless Steel Messenger	\$65.00
#771803	Polyethylene Water Sampler Cases (vary in Size)	\$39.00-\$95.00



CALL TO CONFIRM PRICING ON LEXAN VERTICAL VAN DORN BOTTLES.

HORIZONTAL VAN DORN BOTTLE

There are occasions when a horizontal type water sampler is required; for instances when sampling near the bottom or in the vicinity of thermoclines or chemoclines. This need has been met with the horizontal Van Dorn bottle. This bottle is very similar in construction and operation to the standard Van Dorn bottle except that the release mechanism is like that of the Ekman Dredge. As with the Regular Van Dorn bottle, the horizontal Van Dorn bottle can be constructed of either clear acrylic, P.V.C. or lexan. The Horizontal Van Dorn can be ordered as is, or complete with messenger, 100ft of line, and carrying case.



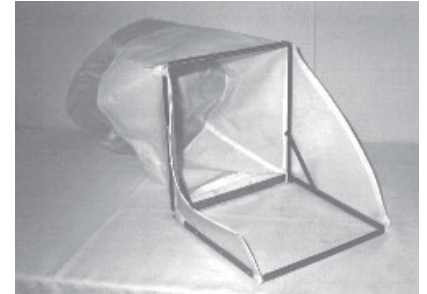
#77182001	2000 mL. sampler - clear acrylic	\$455.00
#77184001	4000 mL. sampler - clear acrylic	\$587.00
#77186001	6000 mL. sampler - clear acrylic	\$638.00
#77192001	2000 mL. sampler - PVC	\$432.00
#77194001	4000 mL. sampler - PVC	\$558.00
#77196001	6000 mL. sampler - PVC	\$615.00
#77937	300 gram Solid Stainless Steel Messenger	\$65.00
#771803	Polyethylene Water Sampler Cases (vary in Size)	\$39.00 - \$95.00

CALL TO CONFIRM PRICING ON LEXAN HORIZONTAL VAN DORN BOTTLES.

Organism Sampling Equipment

SURBER STREAM BOTTOM SAMPLER

This surber sampler is designed for sampling riffle areas in streams and rivers up to a depth of about 18". It consists of two folding stainless steel frames set at right angles to each other. The horizontal frame encloses an area of 12" x 12" and marks out the limits of the sampling area. Attached to the vertical frame is a net to catch the invertebrates as they are dislodged from the substrate. The net is approximately two feet in length and is made of tough, rot-resistant 500 micron (35 mesh per inch) NITEX monofilament net. The Surber Stream Bottom sampler folds flat for easy storage and comes complete with a wooden carrying case to protect the net when not in use. A base height extension may also be used when the horizontal frame must penetrate into the actual stream bed itself. Replacement NITEX nets and samplers with other micron net sizes are available.



#772201500	Surber sampler - 12" x 12" w/ case	\$375.00
#772202500	Replacement nets- 500 micron.	\$195.00
#7722033	Base height extension 3" high, powder coated steel.	\$215.00

D-FRAME AQUATIC DIP NET

Ideal for sweeping over vegetation or use in shallow ponds or streams. The ring is made of rust-resistant powder painted steel, and is securely and easily attached to the hardwood handle using a threaded socket connection. Available in a variety of mesh sizes in either rot resistant NITEX mesh or polyester netting.

#772001	D-Frame Dip Net - 1000 micron	\$ 95.00
#772005	D-Frame Dip Net - 500 micron	\$125.00
#77750	Electro Shocking Dip Net, 1/8" mesh	POR.



HESS STREAM BOTTOM SAMPLER

Gravel and cobble bottoms in streams are effectively sampled with the Hess Sampler. The Canton modification is a stainless steel cylinder with two large openings covered with NITEX mesh. By attaching handles to either end of the sampler, penetration depths of 75 or 150mm (3" or 6") can be achieved in gravel or cobble stream bottoms. Water flows in through the upstream opening of the Hess Sampler and out through the downstream window and into the collection net and bucket. Flora and fauna contained in the stainless steel tube are washed into the collection bucket. Standard size is 500 microns and other sizes are available upon request.



#77888	Hess Stream Bottom Sampler - 500mu	\$895.00
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T - SAMPLER

Designed to take bottom samples of a small surface area, the T - Sampler is constructed of 6mm ABS Drain Pipe. The main body is a 4" (10.2 cm) Inside Diameter Sanitary T-Fitting. The front of the pipe has a 19 cm Long x 12.5 cm High hole covered with S.S. mesh. A Nitex mesh sleeve connects the T-Fitting to a PVC collection bucket. The standard mesh size is 500 micron and other sizes are available upon request.

#77889	T-Sampler - 500mu	\$425.00
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Stream and Ocean Organism Collection

STREAM DRIFT NET

Drift nets are stationary nets designed to sample organisms from flowing waters such as streams, rivers, and tidal creeks. They can be used to capture organisms at and below the surface of the water. Nets can be used individually or in groups with the nets strung out side by side. The frame is manufactured from 3/8" stainless steel, and is 12"x18" (30x45cm) in dimension. The net itself is 39" (99cm) long. The unit comes with two stainless steel stakes, and is available with or without a collection bucket. The standard size netting is 363 microns, and other mesh sizes are available upon request. The stream drift net may be ordered with or without a carrying case.

#772601	Drift Net - 363mu NITEX mesh	\$380.00
#772602	Drift Net with collection bucket.	\$495.00
#77260106	Set of 6 Stream Drift Nets, w/ case, & buckets.	\$2695.00
#77260206	Set of 6 Stream Drift Nets with case.	\$1845.00
#77260306	Case for 6 Stream Drift Nets	\$295.00
#772701	Collection Bucket	\$150.00

OCEAN OR LAKE BOTTOM SLED

Towed on a cable behind a power boat, this sled is used to scrape the benthic surface and collect shellfish, weed growth, sponges, etc. The sled itself is made of Stainless Steel. The arms fold for storage. The chain is of heavy gauge zinc-plated steel and is designed to break away at one end if the sled becomes severely snagged, thus allowing retrieval without further damage. The net is made of nylon and has 1" openings.

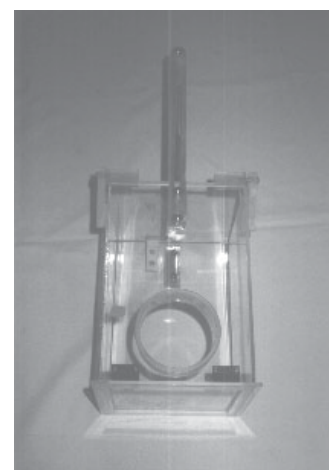
#7712900	Bottom Sled (18"x3"x10" Frame, 18"x36"x10" Net)	\$595.00
#7712901	Bottom Sled (36"x4"x12" Frame, 36"x48"x12" Net)	\$795.00
#77152	Replacement Net (18"x36"x10")	\$59.00
#77153	Replacement Net (36"x48"x12")	\$79.00

CUSTOM SIZE SLEDS AND NETS AVAILABLE



30L SCHINDLER-PATALAS PLANKTON TRAP

This trap, based on a design by Dr. D.W. Schindler of the Fisheries Research Board of Canada, is constructed entirely of clear plexiglass with the exception of its aluminum handle. As the sampler is lowered into the water, the upper and lower doors swing to a vertical position, allowing water to pass through the sampler. When the desired sampling depth is reached, the doors gently swing shut and then seal the sampler closed as it is raised. As the device is pulled from the water, its contents are filtered through a collection bucket. A 30L sample can be collected with the device, and, since no tripping mechanism is required, several samples may be taken very quickly. Dr. Schindler reports a high efficiency of operation for this design when compared with three other plankton sampling devices in popular usage: a 9L Van Dorn bottle, a 5" Clarke-Bumpus #15 net, and a 12" metered tow net of #20 mesh. A collection bucket is required with this trap. It is machined from P.V.C. and is fitted with a removable rubber drain plug. The mesh is rot resistant NITEX, size 363 mesh. Other mesh sizes are available to suit requirements upon request. All Schindler Patalas Plankton Traps are shipped with a case to help prevent damage when not in use.

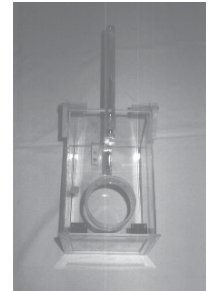


#77213001	30 L trap - clear acrylic	\$535.00
#77213002	30 L trap - acrylic w/ sleeve, collection bucket and case.	\$825.00

12L SCHINDLER-PATALAS PLANKTON TRAP

Since the introduction of the 30L trap, there have been several requests for a smaller capacity trap for easier use from small craft. Our 12L model is similar in design and operation to the 30L model but on a reduced scale. The straining net and collection bucket are interchangeable with the 30L size.

#77211201	12 L trap - clear acrylic	\$385.00
#77211202	12 L trap - acrylic w/ sleeve, collection bucket and case.	\$620.00



Nets

WISCONSIN PLANKTON NET

The Wisconsin Plankton Net is a popular and versatile plankton sampler. The main design feature is the anterior reducing cone which makes it more efficient than a standard conical net. The Wisconsin net is used only for vertical sampling tows. The sampler consists of three major parts: an anterior reducing cone, a posterior conical filtering net, as well as a collection bucket. Standard net sizes are 80 and 153 microns, and other sizes are available upon request. The net may be ordered with carrying case and with or without a collection bucket.

#77258001	80 micron NITEX mesh Wisconsin plankton net with case.	\$375.00
#77258002	80 micron NITEX mesh net with case and collection bucket.	\$510.00
#772515301	153 micron NITEX mesh net with case.	\$315.00
#772515301	153 micron NITEX mesh net with case and collection bucket.	\$550.00

SEINE, TRAP AND HOOP NETS

Our nets are custom made with the finest materials available. In most situations, knotless nylon mesh is used to reduce abrasion on fish. Let us know what your requirements are and we will build a net tailor made to your specific water or fish conditions. All nets may be treated with an UVB coating to prolong their life.

Seines are available in mesh sizes from 1/8" to 1/2", in 4', 6', 8', and 10' heights (some mesh sizes will require horizontal seams to achieve 10' depth). Seines are attached to 3/16" braided poly rope and may be ordered with weights and floats as well.

Trap (Fyke) nets are very effective at trapping fish alive and unharmed. As shown to the right, the basic design consists of 2 steel frames, 4 to 5 steel hoops, and 1 or 2 throats. Frame size can vary from 27" x 39" to 4' x 6'. Mesh sizes range from 1/8" to 1".

Hoop nets normally come with 7 steel hoops, with throats in the 2nd and 4th hoop. Mouth diameters can range from 2' to 5', with mesh sizes up to 3".

#772004 Please Call, Fax, or Email us with your specific requirements to receive a quote.



Trap (Fyke) Net

(Photo courtesy of :
Trent University)

Staff Gauges and Sediment Samplers

STAFF GAUGES

Staff gauges are used as a visual reference of water level. When attached to a piling, bridge base, or flume, an instant visual reading of water level is available. Our Staff Gauges are porcelain coated to resist rust or discoloration and provide for a long life in fresh or salt water. Mounting holes are provided in each section for simple attachment to any suitable structure. We have two styles available:

STYLE "M"

Style "M" staff gauges are 65mm wide. Graduations occur at every centimeter and every decimeter is numbered.

#39742 1 meter section of Style "M" Staff Gauge \$89.00

STYLE "C"

The Style "C" Staff Gauges are 2 1/2" wide, graduated to 0.01 ft. and numbered every foot and 0.1 ft. 3.33 ft sections are available up to 20.00 ft.

#39732 0 - 3.33 ft. \$89.00

#39733 3.33 - 6.66 ft. \$89.00

#39734 6.66 - 9.99 ft. \$89.00

FIND OUT ABOUT OUR OTHER MODELS OF STAFF GAUGES AVAILABLE



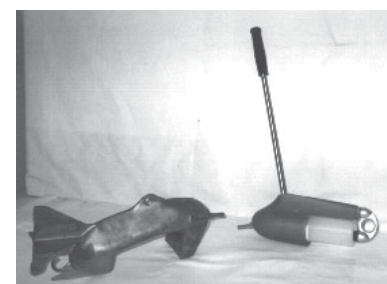
SEDIMENT SAMPLERS

Sediment samplers, depth integrating, point integrating or bed material samplers are available through Halltech in either rod suspended or cable suspended systems. Some sediment samplers may require power to actuate a valve or gate to allow entry of sediment through the entry tube and into the sampler bottle.

DH-48 DEPTH INTEGRATING SEDIMENT SAMPLER

The Model 5200 DH-48 Sediment sampler is a lightweight cast aluminum sampler designed for use in shallow water with a wading rod. (order separately) The DH-48 is a depth integrating type sampler which holds 1 pint plastic bottles.

#80260	DH-48 Sediment Sampler	P.O.R.
#80245	Wading Rod - 1 ft.	\$47.00
#80246	Wading Rod - 3 ft. w/ handle	\$95.00
#80150	1 pint plastic bottles - case of 24	\$56.00
#80155	Labels - for bottles - carton of 500	\$82.00



DH-59 DEPTH INTEGRATING SEDIMENT SAMPLER

The Model 5250 DH-59 Sediment Sampler is a medium-sized sampler designed for use with a cable suspension system. The 15" bronze casting weighs approx. 24lbs. and is made with a vertical & horizontal tailfin assembly to orient the intake toward the oncoming current. An exhaust tube is cast into the body of the sampler and allows air in the sampler bottle to escape downstream as it is displaced by the accumulating sample. The DH-59 sediment sampler is supplied with one 1/8", and two 1/4" nozzles. It is shipped in a heavy duty wood shipping box. Like the DH-48 Sediment Sampler, the DH-59 Sediment sampler is of the depth integrating type.

Therefore it samples the entire time it is submerged. Requires 1 pint plastic bottles. (order separately) Its shipping weight is 35lbs, and has shipping dimensions of 19" x 19" x 6".

#80250	DH-59 Sediment Sampler	\$1095.00
#80150	1 pint plastic bottles - case of 24	\$56.00
#80155	Labels - for bottles - carton of 500	\$82.00



Core Samplers

Our core sampler series is unmatched for its versatility as all of the corer heads are interchangeable with any of the styles of corer tubes. Three styles of corer heads are available:

- ◆ Messenger Released
- ◆ Gravity Corer
- ◆ Hand Corer

The messenger released models are of the flow-through design to minimize the frontal shock wave and help prevent disturbance of the upper layers of the sediment. When triggered, a neoprene valve drops and seals the core tube. It is held in place by a weight and water pressure. Suction formed between the top valve and the core head creates a partial vacuum inside the core tube as the sampler is raised. This partial vacuum helps hold the sample in the core tube or liner tube. An additional weight can be attached to these heads to provide the extra force for deeper penetration or for use in hard sand or marl substrates. All Core Samplers can be ordered with a plastic core catcher to prevent "washouts". The heads are designed to fit each of the styles of the corer tubes and are available in four types:

- ◆ Clear Acrylic (plexiglass) ◆ Stainless Steel
- ◆ Clear Polycarbonate ◆ Stainless Steel w/ Liner and nose-piece.

The acrylic, polycarbonate and stainless steel tubes are machined to a fine cutting edge to facilitate penetration of the substrate. The stainless steel liner tube has a removable nose-piece. The nose-pieces are machined of tough steel and electroplated for corrosion resistance. Lexan nosepieces are available for non-metallic sampling. A lightweight plastic tube can be placed inside the outer stainless steel tube. After the sample has been secured, these liners can be capped and stored for future examination.

HANDCORE SAMPLERS

This simple, inexpensive core sampler is designed for use in shallow water and is easily pushed into the sediment by hand. A flutter valve closes as the sampler is pulled from the sediment and retains all but the lightest samples. Available with the polycarbonate core tube, acrylic core tube, or stainless steel core tube, nose-piece, two liners and caps. The handles are available in 5 ft. lengths for use in deeper water.

POR

GRAVITY CORE SAMPLERS

This simple, yet effective corer can be used with any of our interchangeable core tubes. A flutter valve closes the sampler as it is raised and prevents washout of all but the least consolidated sediments. The Gravity Core Sampler comes complete with your choice of core tubes, 100 ft. of line and can be ordered with or without a carrying case.

#80158

POR

CORE TUBE LINERS

These polycarbonate tubes are used in conjunction with the stainless steel liner core tubes so that samples may be returned to the laboratory "in situ" for later examination. The polycarbonate core liners are available individually or in sets of 6 and 12. Replacement tubes are available for all core samplers. A push rod is available for all core samplers.

#80159

POR



PLEASE CALL FOR PRICING ON CORE SAMPLERS AND LINERS.

Core Samplers

SLIDE-HAMMER CORER

For Paleoecological analysis, Deep water sediments, and Benthic community analysis.

The Bronze Slide Hammer travels freely on a 2.5cm dia. stainless steel rod, and may be lifted and dropped to force the Corer Head through harder substrates.

The Core Head is constructed of Delrin and stainless steel. During penetration, water is allowed to pass through the core tube by a one-way check valve.

This same valve prevents the loss of sediment during retrieval by creating a vacuum.

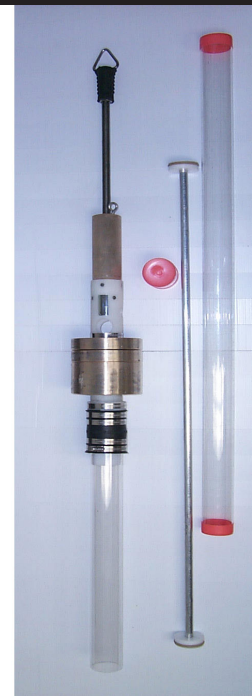
The Corer weight can be adjusted by adding or removing the 4 ballast rings (10 kg each) which slide tightly over the Core Head.

Standard Core Tubes are constructed of 7.5 cm I.D. polycarbonate. They are 125 cm long, with a chamfered cutting edge, and are available in two wall thicknesses - 1.6 mm or 3 mm. Polyethylene end caps are included for the safe transport of intact cores.

Options include custom core tube diameters and lengths, additional ballast, and a core extruding apparatus.

#77301 Slide Hammer Corer

P.O.R.



RUSSIAN PEAT BORER

For Paleoecological analysis of bog and salt marsh sediments, collection of uncompressed cores in poorly decomposed woody peat, and shallow water applications.

Constructed of 5.4 cm O.D. 2 mm wall Stainless Steel, the 50 cm long core tube of this apparatus is designed to cut through sediments as it is turned. A solid Delrin bottom point and core head support a stainless steel cover plate which is curved and sharpened to reduce disturbance as it is inserted into the peat or sediments.

Comes complete with two 1m Aluminum extension rods, and an Aluminum turning handle.

#77302 Russian Peat Borer

P.O.R.



Resins

DAX-8 Resins

DAX-8 resins are an ideal way to separate and analyse humic substances. Humic substances in soils differ from those in stream waters or the ground. Substances are of higher molecular weight, of greater "C" age, of more intense colour, and of higher polysaccharide content than their counterparts in streams and ground-waters. CP spectroscopy is the most useful and definitive characterization tool in demonstrating differences among humic substances from different environments. Most are so-called fulvi or fulvic acid fractions, because traditional isolation methods do not remove the specific substances through alkaline extraction. These unhumified components such as carbohydrates and low molecular weight acids that can account for a large part of the soil fulvic acid fractions are most effectively treated with DAX-8 resins

#76229 DAX-8 Resin (per kg)

\$295.00

Properties of DAX-8 Resin (formerly Amberlite XAD-8)		
PROPERTY	MINIMUM	MAXIMUM
Solids	39%	45%
Density	42 gr/cc	44 gr/cc
Exchange Capacity		0.03 meq/mL
Screens on 20 Mesh		5.0
Screens through 60 Mesh		5.0
Effective Size	0.30mm	0.45mm
Uniformity Coefficient		1.6
Pore Diameter	180	
Porosity	47%	
Surface Area	120gr/m ²	

FISH MEASURING BOARD

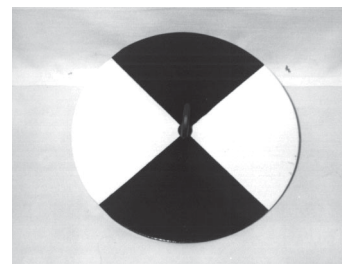
This fish measuring board is ideal for making quick yet precise fish measurements in the field or laboratory. This board is inlaid with a 60cm ruler and is finished in a durable polyurethane finish. A 100cm size for larger fish is also available on request.

#776001	Board - 60cm in length.	\$ 95.00
#776002	Board - 100cm in length.	\$ 115.00

SECCHI DISCS

Secchi Discs are designed for the measurement of the relative turbidity and clarity of a body of water. This disc is constructed of powder coated steel, and is finished in alternating black and white quadrants of acrylic paint. The disc operates as such: the disc is lowered into the water on a graduated line. The depth at which the disc is no longer visible is recorded. The disc is then raised, and a recording of the depth at which the disc reappears should be made. The mean of these two recordings is considered to be the limit of visibility. Although the disc is unable to provide an actual measure of light penetration, it is useful in providing a rough index of visibility for comparative purposes.

#773701	Secchi Disc - 20 cm (8") in diameter.	\$ 65.00
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BEDLOAD SAMPLERS

Bedload Samplers are utilized for sampling and measuring sedimentation flow. Two kinds of bedload samplers are available; hand-held or cable suspended.

HANDHELD BEDLOAD SAMPLERS

These samplers are available in two models: **Helley Smith** or **Geological Survey**. The **Helley Smith** type has a 3.22 expansion ratio and is available in two sizes: 3" 16 GA stainless steel weighing 4.5 pounds or 6" 12 GA stainless steel weighing 25 pounds. Both of the sizes feature an adjustable handle with easy bag removal. The **Geological Survey** type sampler has a 1.4 expansion ratio and 3" orifice. It weighs 10 pounds and is constructed of 1/4" welded steel painted with epoxy primer. This model features an adjustable handle and simple bag removal.

CABLE SUSPENDED SAMPLERS

These cable suspended samplers are constructed of 1/4" welded steel finished with epoxy primer and come in three styles: 3" with 1.4 expansion ratio - weighs 65 pounds; 3" with 3.22 expansion ratio - weighs 105 pounds; and 6" with 3.22 expansion ratio - weighs 167 pounds.

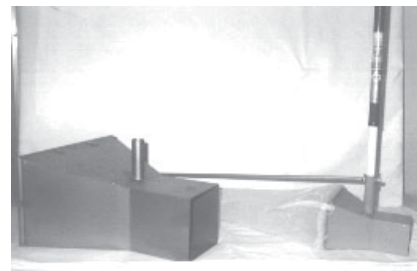
SEDIMENT BAGS

Our sediment bags come in three styles to fit our bedload samplers. All of them are constructed of durable 250mu NITEX mesh. The styles are as follows: Style #1 - Fits 3.22 Expansion ratio and 3" orifice; Style #2 - Fits 3.22 Expansion ratio and 6" orifice; Style #3 - Fits 1.4 Expansion ratio and 3" orifice.

CALL, FAX OR E-MAIL TO GET CURRENT PRICING ON SEDIMENT SAMPLERS.

LIMNOLOGICAL ACCESSORIES

#77937	300 gram messenger, stainless steel, solid.	\$ 70.00
#773960001	600 gram messenger, stainless steel, solid.	\$ 99.00
#775001	Nylon rope, 1/4" diameter, 100 ft.	\$ 40.00
#775002	Stainless steel aircraft cable, 1/16" diameter, 100 ft.	\$ 115.00
#775003	Stainless steel aircraft cable, 3/32" diameter, 100 ft.	\$ 135.00
#775101	Equipment crane with 2 speed, heavy-duty, hand winch.	P.O.R.
#775102	Crane without winch.	P.O.R.



Introducing the Complete Solution for Coastal and Fresh Water Research Applications:

The **MiniBAT** Miniaturized Towed Instrumentation Platform Model 8820



This extremely lightweight, remotely controlled towed instrumentation platform has been designed for use with a variety of data collection instruments. It provides an extremely flexible profiling system for use in estuaries, lakes, rivers, and coastal areas. Deployment of the **MiniBAT** is made simple by the easy to use Windows based software provided, and a control box for automated or manual operations.

Some of the **MiniBAT's** features include:

- ~ Flexible mounting of existing instrumentation
- ~ Easy towing with a 5 to 10 meter power boat
- ~ Power - 12 VDC battery or 120/240 V line
- ~ Operational Depth - surface to 60 meters
- ~ Position Coordinates recorded with data (optional)
- ~ Profiling at speeds up to 10 Kts
- ~ Remote undulation control by computer
- ~ Direct depth measurement
- ~ Auto bottom following and avoidance
- ~ Basic depth stability: <1 meter
- ~ Graphical Display of flight path

#77525

MiniBAT

Please call for additional information and to receive a quote