Wildco® Nets, Use and Maintenance

Warranty and Parts:

We replace all missing or defective parts free of charge. For additional parts, use part numbers above. We accept Mastercard, Visa, American Express, checks, institutional P.O.'s. All products guaranteed free from defect for 90 days. This guarantee does not include accident, misuse, or normal wear and tear.

Sampling Procedures:

Wildco® manufactures a variety of nets that can be used in many field conditions. They can be towed horizontally from a boat, pulled up vertically from the side of a boat, or from a dock or pier. They can be used in shallow water to stir up the bottom and catch any organisms in a net downstream.

Vertical Tow plankton nets include the **Wisconsin Net**, the **Birge Closing Net**, the **Hensen Egg Net**, and the **Extended Closing Net**. **Turtox® Plankton Tow Nets** can be used for vertical tows if a weight is attached to the line to help them sink. For all these nets, tightly tie a line to the net. If you are not using a winch or hand reel, it is a good idea to attach the other end of the line to the boat. If sampling from a dock or pier, attach the line to something sturdy. Lower the net to the desired depth, then raise it at a slow and even pace.

For the **Birge Closing Net** or the **Extended Closing Net** with a closing release mechanism attached, fasten the rope to the second ring down if it is not already connected. The closing release mechanism consists of a stainless steel body, a towing eye and a release tab. A second knot should be tied just below the stainless steel body. Tie this knot with the net fully extended. Insert the tab into the stainless steel body. Slide an 8-ounce messenger onto the other end of the rope, pointed side down. Lower the net to the desired depth, then drop the messenger down the line. This will release the tab and allow the net to drop, covering the second ring down, thus preventing any more water to pass through the net. Raise the net at a slow and even pace.

Calibrated line can be used to determine the depth of vertical sampling. If you already have calibrated line, make sure the first calibration mark is measured from the net mouth (the large opening). If you wish to calibrate your own line, it is easiest to mark it before the sampling session. Attach the line securely to the swivel ring and measure from the net mouth for the first mark. Running the line down a long hallway simplifies the marking process.

Horizontal Tows can be done with **Turtox® Plankton Tow Nets**, **Made-to Order Conical Nets**, and **Bongo Nets** (two nets side by side).

For horizontal tows using a boat or raft, tightly tie a line to the swivel ring. Make sure you tie the other end of the line to a winch or to the boat. A flowmeter can be attached in front of the net mouth. A tow weight or line depressor will help sink the net and keep it from bouncing along the top of the water.

If you are using a **Turtox® Plankton Tow Net**, it works best if you fill the bottle with water first. This can be done from the outside of the mesh so you don't accidentally add plankton to your sample. A small tow weight can be added to the line to help it sink lower.

Horizontal tows can be done from shore using a lightweight net such as the **Turtox® Plankton Tow Net**. You can attach a line to the swivel ring and toss the net offshore. Pull it in at a steady pace. Another easy method for sampling from shore is to attach the net to a telescoping pole such as a painter's pole.

We can design and make custom nets such as a **Net-Within-a-Net** where you can sample two different-sized organisms at once or screen out organisms within a certain range.

Dip Nets and Kick Nets are primarily used to collect macroplankton and small invertebrates from streams and other shallow waters. They are usually held in place on the streambed while a helper gently kicks up the bottom upstream from the net.

The **Turtox® Triangular Dip Net** has a shroud all around to protect the net where vegetation and debris can cause damage.

The **Turtox® D-Frame Dip Net** is the most commonly used and is suggested in many protocols. The net is open at the top and has a canvas bottom shroud to protect the bottom from snags. The rectangular **Turtox® Bottom Kick Net** also has a canvas bottom. It is commonly used by the USGS. A sampling square is available for use in from of this net for quantitative studies. All of these nets can be purchased in numerous mesh sizes depending on the size of the organisms being collected. The US EPA and US Geological Survey both recommend 500 micron mesh for general invertebrate sampling. You can choose from three handle lengths and a collapsible handle.

The **Zo™ Seine** is also called a Kick Net. It is usually used in open or flowing water in a wide sweeping motion. It can also be held in place and used the same way as a kick net. An optional adaptor with collection bottle is available.

Surber Samplers and Hess Samplers are primarily used for quantitative sampling of the streambed.

The **Surber Stream Bottom Sampler** is placed in the streambed with the open frame in front of the net and the current flowing through the net. Always stay to the side of the sampler. You may wish to gently place cobble next to the frame to help keep the water from going out under the frame or net. Gently stir up the substrate within the frame, allowing the organisms to wash into the net. Pick up each stone and gently wash it in front of the net, then place it outside the frame to the side. Continue until the area inside the frame is clear of stones and debris.

The **Hess Stream Sampler** is similar to the Surber Sampler but is intended for gravel and cobble bottoms. It has two strong reversible handles for pushing and rotating the sampler to 3 inches or 6 inches. The handles can be placed on either open end of the sampler to better position it in the streambed. Once it is in place, gently scrub the pebbles inside so the specimens are carried by the current into the net.

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Sample Transfer:

Most nets have a bottle or a collection bucket with a filter screen. When the net has a collection bottle (without a filter screen), the plankton will usually collect at the bottom of the netting. Hold the net vertically and tip the bottle just enough to pour all the water out of the bottle. After the net is raised above the water, you can use a wash bottle to rinse any material clinging to the sides of the net down into the collection bottle. Another method is to keep the mouth of the net above water while raising the net up and down. Remove the plastic collection bottle from the net and cap it to take to the lab for further study. Extra collection bottles are available.

For nets with screened Dolphin® Buckets, unscrew the bucket from the adaptor and rinse the contents into a sample storage bottle for transport.

Your Surber Sampler, Dip Net or Kick Net may not have a collection device on the end. These nets can be rinsed out from the outside using a wash bottle or a gentle wash with a hose, usually into a sieve or wash bucket. They can also be inverted for rinsing.

Care, Cleaning and Storage:

At the end of each sampling session, remove all debris from the net. Rinse thoroughly with fresh water and allow to air dry completely before storing. Air-drying should be done in a darkened or shady area out of direct sunlight. There should be ample air movement.

If you must travel before cleaning is possible, keep the net damp and free of debris. Rinse and air-dry it as soon as possible, preferably the same day. If stored wet, the net may mildew, which can damage the fabric. For mildew, Use a mild hand detergent and a non-chlorine mildew remover for nylon. Rub gently as needed.

When cleaning the net, keep the cable connectors away from the mesh to avoid damage. You can fasten them to the net ring with a strong safety pin to keep them out of the way.

Algae, reeds, sedges, and other aquatic vegetation may cause "grass stains" on the net. Most detergents alone rarely remove grass stains or dried debris. A build-up of dried or fresh vegetation is best removed by sponging gently with ethyl alcohol or isopropyl alcohol. When the debris is removed, try rinsing with vinegar to remove any remaining stains. Spray & Wash® Trigger Spray may also help (make sure that it does not contain chlorine bleach). Avoid other brands since they may contain ingredients that are harmful to the nets.

When sampling in hard water, calcium carbonate and other insoluble particles may build up and plug the apertures in the Nitex® netting. If this occurs, try soaking the net in a mild vinegar solution. Avoid commercially available products such as CLR® or Limeaway®, which may damage the net.

Wildco nets may be soaked in 10% chlorine bleach solution for five minutes and then rinsed immediately. Longer soaking times or stronger solutions of chlorine bleach may damage the nylon fabric. **We do not recommend using any other chemicals not mentioned above.**

After cleaning, rinse the net thoroughly and air-dry out of the sun.

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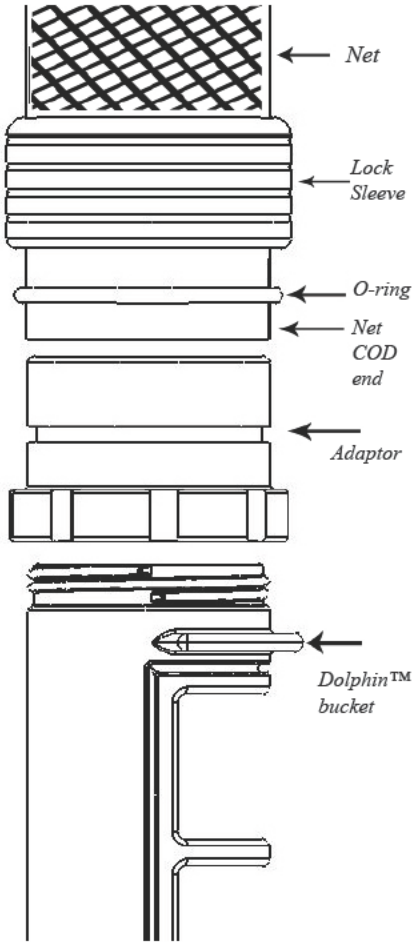
Attachment of Dolphin™ Buckets and Adaptors:

The Dolphin™ Bucket is a patented plastic bucket and adaptor system exclusive to Wildco®. To attach a Dolphin™ Bucket to a net, and adaptor assembly must first be attached to the COD (small) end of the net. The assembly procedure refers to the diagram on this page.

1. The first part of this adaptor assembly is the Lock Sleeve. It is normally a yellow cylinder that has a flange pointing inward on one end. This Lock Sleeve normally has grooves on both the outside and the inside. Slide this Lock Sleeve over the outside of the net, flanged end first.
2. Following the Lock Sleeve, slide the O-ring(s) over the outside of the net as well. Some larger adaptors require two (2) O-rings.
3. The adaptor (gray part with internal threads and one or two external O-ring grooves) is slid into the COD end of the net, up to its shoulder.
4. Once the COD end is fully seated on the adaptor, slide the O-ring(s) into place, into the groove(s) that are on the outside of the adaptor. The groove is inside the net, the O-ring is on the outside with the net in between.
5. Slide the yellow Lock Sleeve into place over the O-ring. This will hold the COD end of the net onto the adaptor assembly.
6. Screw the Dolphin™ bucket onto the adaptor assembly.



Exploded view of Dolphin™ bucket and adaptor assembly

Accessories:

A wide range of accessories and replacement parts is available from Wildco®. Request our catalog or visit our website at www.wildco.com.

For horizontal tow plankton nets:
426-E50 Turtox® Line/Tow Weight, 4.5 oz
426-E20 Connector, Hose and Pinchcock
7900-C27 Sample Bottle, 125 ml
7900-C25 Sample Bottles, 125 ml, pack/12
90-G10 Line Depressor, steel, 11 lb

Plastic Bottles (available in smaller sizes):
7900-D87 Wash Bottle, one-piece, 1000 ml
7900-E87 Square Sample Bottle, 1000 ml
Other:
39-B10 Mechanical Flow Meter
39-B15 Extendable Rod for Flow Meter
62-C15 Polyester Line, 3/16 in, 100 feet
78-025 Sampling Square, .25 square meter