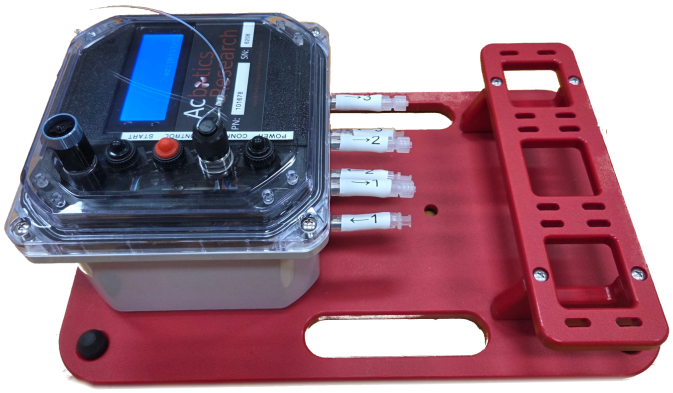
Acbotics Research

AcSample-VIS

Product Description

The AcSample-VIS is the Acbotics Research automatic, triplicate, filter-agnostic eDNA sampler for applications including shipboard and in situ sampling. All units include triple peristaltic pumps with independent flow sensors, volume-controlled sampling per pump, and an LCD screen displaying pump volume, system status, and time. Luer lock filter attachment, inlet or outlet filtering. Programmable and customizable with battery, sensor, baseboard and accessory options.



Default Sampler Behavior

Mode	Volume Sample	Control/Run Dry
State	Power ON, Control OFF	Power ON, Control ON
Control Logic	1. **INITIALIZE:** Boot microcontroller, initialize SD card. 2. **START:** Run all pumps for **Initialization Pulse Time**. 3. **WAIT:** Pumps off. Wait until **Startup Delay** has elapsed (AcSample-VIS-A/B/D) or button press (AcSample-VIS-C). 4. **RUN:** Run all 3 pumps, stopping individual pumps as **Sample Volume** pumped or **Max Pump Time** elapsed. 5. **DONE:** Pumps will turn off.	All pumps ON until control or power off. Use for negative control, to ensure all water in tubes is counted, or dry filters.

Specialized sampling modes including depth trigger, duty cycle, and serial control also configurable.

Sampler Box Options

Sampler	AcSample-VIS-A	AcSample-VIS-B/C	AcSample-VIS-D
Max depth rating	5 meters	0 m (IP67)	20 meters
External switches	Rotary waterproof switches	Push button switches	Rotary waterproof switches
Env Sensor	Bar30 Pressure/temperature	N/A	Bar30 Pressure/temperature
Button press start	N/A	AcSample-VIS-C only	N/A
Pumps	(3x) G928, 24V high flow peristaltic, 600 mL/minute free flow.		
Flow sensors	(3x) FM-HL2124, +/- 5% accuracy.		
Program & Charge	Program & charge via shore cable or manager box.		
Data offload	Offload via shore cable or manager box.		
Filter attachment	Luer lock (F inlet, M outlet)		
Filter compatibility	Filter-agnostic (adapt to luer lock), see flow rate table.		
Pressure relief	Pressure relief valve for safe internal battery charging.		
Timing	Internal RTC, sync to Manager Box GPS-RTC or manually set via shore cable.		
Battery Options	*NiMh:* Tenergy 12V 2000 mAh NiMH. 50 min continuous triplicate sampling. *LiPo:* Talentcell 10.8V 5200 mAh LiPO. 120 min continuous triplicate sampling.		
Baseboard Options	*Fixed Filter Holder Baseboard:* Fixed filter holder base *Removable Filter Holder Baseboard:* Removable, weighted filter holder base.		

Note: Custom sensor packages, pump configuration and batteries available. Contact us for details!

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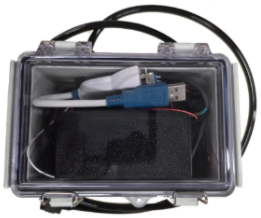
Accessories



Shore Cable



Manager Box



Battery Box



Filter Kit

Category	Accessory	Included or add-on	Description
Packing Case	Carrying Case	1x included per sampler	Apache 4800 carrying case (Black = AcSample-A, Green = AcSample-B/C, Khaki = AcSample-D).
Programming, data offload and charging	Charge Cable	1x included per sampler	Compatible with shore cable, manager or battery box.
	Shore Cable	1x included per order	Serial and power cable for use with all AcSample products.
	Manager Box	Add-on	IP67 for user-friendly configuration, data offload, charging and control of AcSample systems.
	Battery Box	Add-on	Adds external IP67 battery capacity to your AcSample-VIS system.
Spares & Tool kit	Tool kit	1x included per order	Pliers, screwdriver, spare luer lock attachments, spare ¼" tubing, microSD adapter, spare velcro.
Tubing Kit	Basic Extender Kit	1x included per sampler	6 x 18 inch long, ¼" diameter silicone tubes, ends male and female luer.
	XL Extender kit	Add-on	3 x 8 ft long, ¼" diameter reinforced tubing ends male and female luer.
Filter Kit	Smith-root filter kit	Add-on	6 x Smith-root non-self-preserving filter holders with luer adapter tube, 12 x drain discs, 12 x 47 mm diameter filter papers.
Vacuum Kit	Vacuum Kit	Add-on	Hand vacuum pump + adapters.

Flow Rate Table

Filter Housing	Filter	Recommend	Inlet Flow	Outlet Flow*
Smith-root	47 mm, Glass Fiber	Inlet	500 mL/min	-
	47 mm, MCE 1 um	Inlet	320 mL/min	-
Cobetter Filter Holder	47 mm, MCE 1 um	Inlet	260 mL/min	360 mL/min*
Sterivex GP 0.22 um syringe filter		Inlet/Outlet	120 mL/min	260 mL/min*
33 mm diameter PES, 0.45 um syringe filter		Inlet/Outlet	160 mL/min	260 mL/min*
Wilderlabs CA 1.2 um syringe filter		Outlet	-	350 mL/min*
Sylphium 1.2 um PES		Inlet	310 mL/min	370 mL/min*

* ALWAYS use a clean, dry filter. Use with a wet filter, or one that has already pumped water through, may damage the sampler when used on the outlet. When using filters on outlet, follow tube sterilization protocol between uses.

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