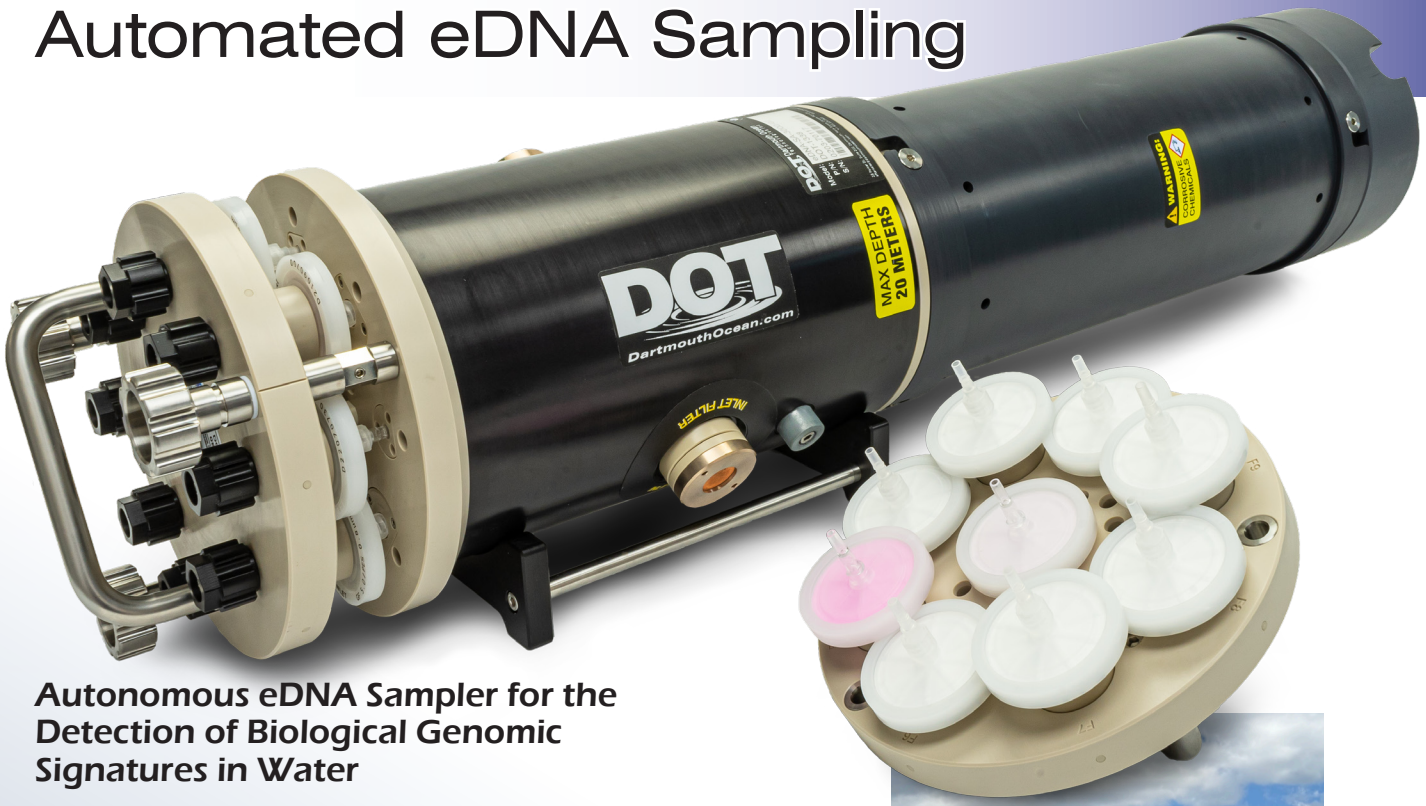
Dartmouth Ocean Technologies Inc

SCAN FOR DIGITAL COPY

eDNA Sampler

Automated eDNA Sampling



Autonomous eDNA Sampler for the Detection of Biological Genomic Signatures in Water

Features at a Glance:

- Automatic operation according to a preconfigured mission profile via time or depth, or 3rd-party sensor RS232 triggering
- Fluidic architecture reduces reagent usage and facilitates storage of waste products for later disposal
- Sample preservation via RNAlater (or alternate preservative) enables long-term, unsupervised deployment
- Multiple sample collection, storage and transport with integrated filter cassette
- Various filter pore sizes available
- Self-cleaning to prevent cross-contamination between samples
- Compact design allows for deployment from a variety of vessels and platforms

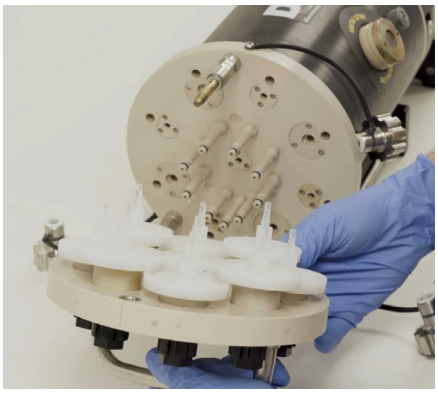
eDNA Sampler - Automated eDNA Sampling

Multi-sample eDNA Collection Made Easy

eDNA sampling is a valuable tool for studying both prokaryotic and eukaryotic biodiversity in the water column. Dartmouth Ocean Technologies has developed a portable, convenient solution for use in many data collection scenarios.

The programmable nature of the instrument allows for increased sampling resolution over long periods of time – ideal for time series studies.

Filters are sent to labs for extraction and sequencing. Each eDNA Sampler cassette can capture 9 discrete samples. There is enough reagent on board to capture 3 full cassettes of samples, or 27 samples total. The integrated multi-filter cassette makes transporting the samples more convenient.



Filter Cassette Removal

Environmental Monitoring

- Biodiversity monitoring
  - Marine Protected Areas (MPAs)
  - Offshore survey
  - Wind farm monitoring
  - Marine Mammal Detection (MMD)
  - Aquaculture
  - Invasive species
- Environmental monitoring for specific organisms
  - Harmful algae (ie. Alexandrium sp.)
  - Parasites or pathogens
  - Indicator species
  - Biodiversity surveys

Specifications

Depth Rating:	20 m, 200 m or 3000 m		**Reagents:** (volumes per filter)	RNAlater (9 mL) Milli-Q (18 mL) 5% HCl (16 mL)
Weight: - In Air - In Salt Water	Standard: 10.2 kg (22.4 lbs) 0.43 kg (0.9 lbs)	Deep Water: 14.4 kg (31.7 lbs) 4.21 kg (9.3 lbs)	**Sample Filters:** - Size: - Pore Size: - Material:	(defaults - Alternative pore sizes available) 5 GF/0.45 PES, 10 GF/0.8 PES, 10 GF/1.2 PES, (other combinations available) Polyethersulfone (PES) GF pre-filter
Dimensions: - Diameter - Length	Standard: 167 mm (6.6 in) 800 mm (31.5 in)	Deep Water***: 167 mm (6.6 in) 800 mm (31.5 in) + compensator	**Intake Filter:**	35 µm PEEK (default)
			Sampling Rate:	Up to 1 L per hour**
Supply Voltage:	7VDC (Battery) or 12 - 24VDC		**Sample Volume:**	Tested for 100 - 5000 ml (user-definable)**
Power Draw:	3W (average), 7W (peak)		**Options:**	Pressure compensator External battery case (Lithium) Deployment-specific mounting brackets
Data Output:	RS232			

* Specifications subject to change **Dependent on environmental conditions ***Dimensions are for 20 metre version only; 200 & 3000 metre requires add-on pressure compensator

Dartmouth Ocean Technologies Inc
201 Brownlow Ave., Unit 15
Dartmouth, Nova Scotia
Canada B3B 1W2
sales@dartmouthocean.com
DartmouthOcean.com

MADE IN CANADA
FABRIQUÉ AU CANADA