



- Number of samples: 13 with 250 ml (500 ml bottle frame available).
- Performs well in both low and high flux environments.
- Depth-rated to 10,000 meters (titanium pressure case).
- Titanium frame reduces weight and resists corrosion.
- For more information about this sampler, see the Sediment Traps pages at mclanelabs.com.

Parflux Mark 8 Sediment Trap

Application:

The Mark 8 Sediment Trap is a time-series instrument that autonomously collects the flux of settling particles on an operator-defined schedule. The wide top funnel accumulates particulate specimens into individual sample bottles. Sediment sampling is part of ongoing global carbon cycle studies, paleoproxy and radionuclide investigations and environmental or pollution monitoring. At half the size of the traditional PARFLUX Mark78H Sediment Trap, this next-generation Trap is easy to deploy and performs well in both low and high flux environments.

Features:

Cone interior is natural polyethylene to maintain sample integrity. Manufactured with the same field-proven components - electronics, rotator assembly, drive motor, baffle, collection cone - as the Mark 78H Trap. Non-volatile memory stores critical deployment data. Optional Wet Sample Particle Divider (WSD-10) can split wet specimens into five or ten equal parts.

Sample schedule options:

Methods for defining a time-series sample schedule are flexible. Specify the date and time of each sample, a start date and fixed time intervals, or equally space samples between start and end dates. Data for each sample event includes collection date/time and battery voltage.

Customized hardware and software:

Adaptive sampling is possible with optional ethernet communication. Other options include compass/tilt sensor which records a time history of tilt magnitude and direction, pressure sensor and external temperature sensor.

Deployment:

Deploys from a stand-alone mooring or a large high-tension vertical array.

Mark 8 Sediment Trap Specifications

DIMENSIONS:

Diameter: 66 cm (26 in)

Height: 116 cm (45.5 in)

Vertical surface area: 0.66 m²

WEIGHT APPROX (NO BRIDLE):

In air, 250 ml bottles full: 42 kg (93 lbs)

In water, 250 ml bottles full: 18 kg (40 lbs)

COLLECTOR:

Number of samples: 13

Bottle volume: 250 (500 ml option)
500 ml (13 samples, wider bottles)

Aperture area and diameter: 0.25 m², 56.5 cm (22.2 in)

Baffle material: Polycarbonate, 1.0 mm wall thickness

Baffle cells: Approx. 420, 2.5 cm diameter

Aspect ratio of cell (h/d): 2:5

Cone and cone angle: Natural polyethylene, 41° angle

ROTARY ASSEMBLY:

Drive motor type: Electronic stepper motor

Drive train: Direct gear train

Time to shift a bottle: 38 s

Gear plate diameter: 34.5 cm

CONTROLLER:

Pressure housing: Titanium

Power supply: 14 “C” size alkaline cells

Communications: Serial (RS-232), Optional Ethernet

OPERATIONS:

Maximum depth: 10,000m (Titanium pressure housing)

Battery endurance: 5Ah alkaline battery pack

Maximum deployment time: 18 months

Operating temperature: -2° to 35°C

FRAME:

Material: Titanium, Ti-45 G-2 (standard housing)

Structure and bridle config.: Weldment, 3 and 3 in-line

Bridle eyes: 16 mm (5/8”) insulated