

BoWaSnapper

Multihorizon-BottomWaterSampler K/MT 421

The BoWaSnapper is a Multihorizon-BottomWaterSampler, suitable for deep-sea deployment and used for the investigation of the sediment-water interface (particles, organisms, geochemical tracers).

It has been developed in collaboration with Dr. E. Sauter from Alfred-Wegener-Institute, Bremerhaven, and is successfully in use at water depths between 20m and 5500m since 2001.

The BoWaSnapper enables the high resolute sampling of the bottom closest water layers within a very short period (some minutes only).

Six water bottles vertically adjustable and attached to the middle axis carry out the water sampling.

Equipped with an autonomous bottom releaser that closes the water bottles some minutes after the touch-down on the sea bed, the Multihorizon-BottomWaterSampler can be used with any serial wire, i. e. no data transfer cable is necessary.



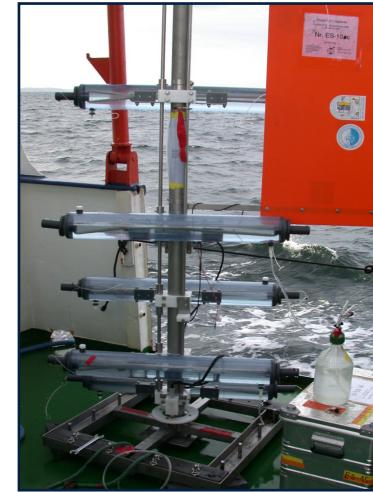


The six transparent water bottles vertically adjustable are aligned with the current by a current vane.

A bottom releaser closes the bottles with a certain time delay after sediment particles dispersed by the touch-down are swept away.

By that original bottom water is collected from every distinct layer above the sea bed.

In permanent use on countless ocean voyages since 2001:
FS "Polarstern", RV "L'Atalante",
FS "Alkor", FK "Littorina"



Observation of particles and gas bubbles by means of transparent water bottles

Technical data

Release unit:	The burn wire electronics bases on the electrolytic process. When landing on the sea floor a plate in the basic frame is pushed up. It then activates the autonomous release electronics which sets the corrosion wire (programmed with time delay) under voltage.
Current vane:	to align the water bottles with the current
Float unit:	e. g. 1 Benthos glass sphere; avoids that the serial wire falls into the instrument
Rack:	plate with lead weights, basis frame with revolvable middle axis material: 1.4571
Measurements:	length: 1500mm; width: 800mm; height: 2500mm (incl. current vane)
Weight:	appr. 200kg (lead weights: appr. 100kg)
Sample volume:	six transparent water bottles at 6 liters (Polycarbonat) sample time at the bottom: < 10 minutes max. operation depth: 6000m operation with serial wire (no data transfer cable necessary) easy to assemble/disassemble and to transport

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