

SAMPLERS FOR SUSPENDED SEDIMENT

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04.31 Suspended load sampler, Delft bottle type

This sampler is used to measure suspended sediment transport in rivers and other water courses, from the surface down to 0.1 m above the river bottom. The sediment containing water flows through a bottle shaped sampler. The shape of this sampling body induces a low pressure at the rear face in such a way, that the water enters the nozzle of the sampler with almost the same velocity as the undisturbed flow. The sharp decrease of the velocity in the wide sampling chambers causes the sediment material to settle there.

The sampler can be used in two ways:

- Suspended on a cable for all depths from the surface to 0.5 m above the bottom. A tail fin keeps the nozzle in up-stream direction.
- Standing in a frame on the bottom for distances of 10, 20, 30, 40 and 50 cm from the bottom.

The set comprises a sampler, the frame, a number of nozzles and measuring glasses. Because of the flow-through principle a large volume of water is sampled.

Advantages

- Easy to use.
- Sturdy construction.
- Can be used at any depth.

Limitations:

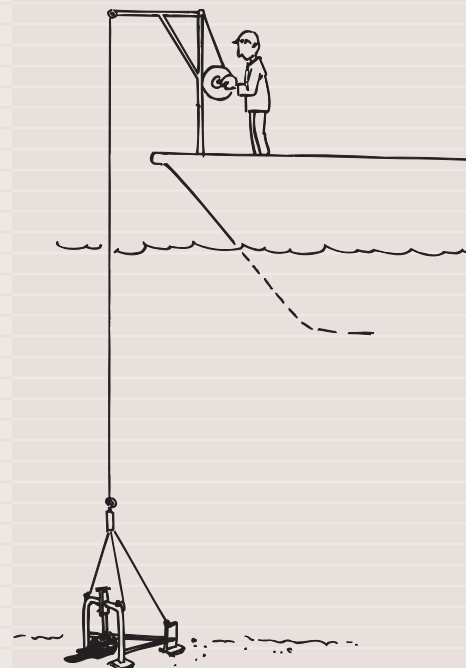
Handling requires a davit with depth counter and winch, due to the weight of the instrument. Simultaneous measurement of velocities is necessary.



Suspended load sampler Delft bottle type

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The sampler is placed on the bottom of the river using a hand winch.



The current velocity of the water determines the shape and the size of the nozzle. This can be adjusted quickly and easily (exchanging the nozzles).



BENEFITS

04.31 Delft bottle

- Samples flowing sediment just above bottom
- Perfect height control, lowered on bottom
- Bronze, sea water proof body



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