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INSERT YOUR ABSTRACT TITLE A New Simple Suspended-Load Sampler: Continuous Particulate Matter Collection from Rivers with Low and High Suspended Matter Load

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Please fill in your abstract text. Suspended particulate matter (SPM) or suspended load in waters is the part of the stream load that is carried for a considerable period of time in suspension. Long term suspended sediment monitoring is hampered by the limited sample size or enormous investments in equipment and/or working hours. In addition many samplers are limited to easily accessible sampling points equipped with electric power supply or to certain types of streams and cannot operate unattended in case of floods. The sorption characteristics of the suspended particulate matter (wash load) have been recognized as important transporters of natural and anthropogenic trace constituents. To allow repeated analyses sometimes several grams of dried SPM are needed.

All parts of the sediment sampler are available as spare parts in hardware stores and made of polyvinylchloride (PVC). The inlet device is connected with the sampler by a tubing of several meter length. Without a pump the sampler can be positioned at a safe place lower than the inlet device to allow a continuous flow. Only a small portion (0.001-0.002 l/s) of the river water flows down through the central pipe by gravitational force to the bottom of the container. Due to the considerable larger diameter of the container the water rises very slowly (1-3 hours) and leaves the container at a small overflow-pipe allowing a nearly complete settling and/or flocculation (80-90%) of the suspended load in the container.

The sampler was tested in an alpine torrent and two rivers in flat areas. The newly developed sampler offers following advantages. The sampler (1) is inexpensive and robust, (2) operates in case of small cascade or cataracts ($\geq$0.5 m) without power supply, (3) can be used singly or in lateral or vertical nests, (4) allows continuous settling and flocculation without perturbation by vibrating movements of the sampler (5) is resistant to plugging and clogging by coarser particles and plant debris, (6) has a sampling efficiency of 80 – 90 % in field tested sites.