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# Installation procedure for: PRENART Super Quartz/Steel soil water sampler

## Materials:

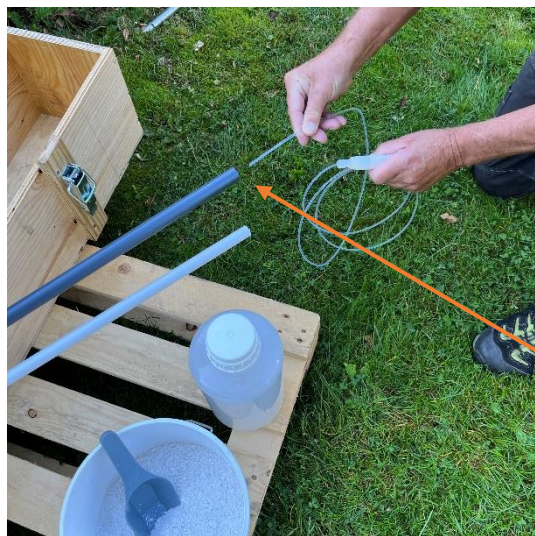
- PRENART soil water sampler
- PRENART collecting bottle with screw cap
- PRENART steel rod, diameter 24 mm
- Plastic or metal pipe, max diameter 20 mm
- Plastic pipe with funnel
- Water
- 1-2 L beaker
- Silica flour
- Vacuum pump



The installation kit

## Procedure:

1. New PRENART soil water samplers are rinsed in deionized water, ready for installation.
2. Mix a thin slurry in the beaker with water and silica flour or soil.
3. Place the PRENART soil water sampler in the slurry and put 0.5 bar vacuum on for 10-15 min. By this procedure, the biggest pores in the sampler are filled with fine soil or silica flour to ensure a tight capillary contact with the soil.



4. With the PRENART steel rod a hole is made in an oblique angle in the soil to the wanted depth for installation. This procedure ensures that the soil directly over the sampler is left undisturbed.
5. Prepare the sampler for installation by putting the tube from the sampler through the plastic or metal pipe.

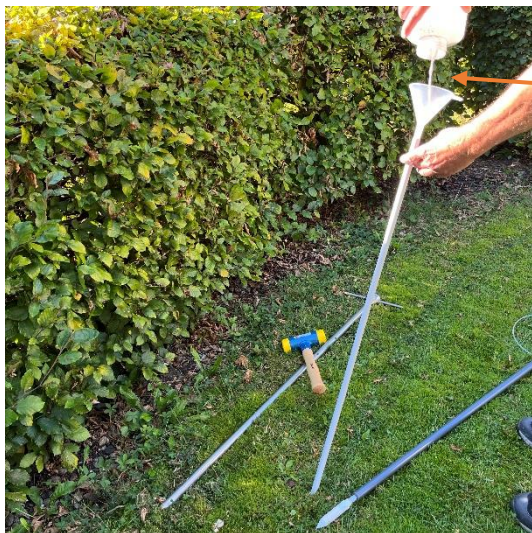
6. The installation hole and the Super Quartz/Steel sampler prepared and ready for installation



7. Mix a thicker slurry of water and silica flour or soil (1:2, about 50 g water to 100 g silica flour or sieved soil)



8. Pour the slurry down to the bottom of the hole through the plastic pipe with the funnel. This procedure ensures safe capillary contact to the sampler and soil water can move readily from the pores of the soil through the pores of the PRENART soil water sampler.



9. Immediately after the slurry has been placed at the bottom of the installation hole, the sampler is pushed down in the hole with the pipe.

**NOTE! It is very important to have the sampler ready, so that it is placed immediately in the slurry before the silica flour settles in the hole.**



10. Back-fill hole with slurry or native soil free of pebbles and rocks.

11. The tubing is connected to the collecting bottle. Put the tube through the fittings and washer of the screw cap and 1-2 cm into the bottle. Then vacuum can be applied to the bottle.



**Notice:** Using the installation procedure with silica flour, it can in extreme situations with very low concentrations of elements in the soil be advisable to use acid washed silica flour for installation to help stabilization of the system. Always use HCl, 0.5 N, for washing of silica flour and cleaning of soil water samplers. Oxidizing acids like HNO<sub>3</sub> may damage the nylon fittings.

12. Do not use the first samples for chemical analyzes. The system needs time to stabilize.