

FIELD PROTOCOL FOR WORK PACKAGE T 3.10 FRESHWATER PROVISIONING, WATER QUALITY

Person responsible: Simon Kolb, Forest Research Institute, Depart. of Soils and Environment (Simon.Kolb@forst.bwl.de)

Name of Sampler	
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Region	
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Plot ID											
Date of Sampling											
Time of Sampling											

**A: Permanent suction cup (PSC)**

Pressure of deflation [bar]		

Check first, if there was pressure remaining in the system (connect the pump, open the valve and read out the pressure gauge).

Amount of soil solution [ml]		

Amount of soil solution in sample bottle. Unit: milliliter. Required accuracy: 50ml (-> 0, 50, 100, 150, ....1000 > 1000)

Sample filled in bottle		

This field serves mainly for reminder. Fill in the labeling of bottle, in which you fill the sample (e.g. [Region\_abbreviation]\_[Plot ID]\_[60]). Use as [Region\_abbreviation] = FN(Finland);RO(Romania);PL(Poland);IT(Italy);SP(Spain);D(Germany). [60] is the abbreviation for (60 cm depth) PERMANENT suction cup. Crucial for database of our laboratory. E.g.: FN\_01\_60

Pressure set up after sampling [bar]		

New pressure to which the permanent suction cup device is set up after sampling, should always be 0.5/0.6 bar. This field serves mainly for reminder.

Remarks: Any particular occurrences e.g. damaged system/conducted maintenance/assumption of polluted sample can be noted here.

**B: Soil moisture (Data Logger Em50)**

Checked device identity (no=0/yes=1)		
Logger read out (no=0/yes=1)		
Data file saved at laptop (no=0/yes=1)		

Open software "ECH20 Utility" and check if "Device identity" (Name and Site Name) corresponds to the Plot ID

This field serves mainly for reminder.

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Plot ID											
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**C: Mobile suction cup (MSC)**

Sampling point of MSC	Sampling point number from which sample is collected. You find the sampling scheme plan/map in the xls-file on the spreadsheet "Spatial_Sampling_Scheme"
Pressure of deflation [bar]	See "Pressure of deflation" at A:Permanent suction cup (PSC)
Amount of soil solution [ml]	Amount of soil solution in sample bottle. Unit: milliliter. Required accuracy: 50ml (-> 0, 50, 100, 150, ....1000 > 1000)
Sample filled in bottle	This field serves mainly for reminder. Fill in the labeling of bottle, in which you fill the sample (e.g. [Region_abbreviation]_[Plot ID]_[sampling_point_of_MSC]_[60]). Use as [Region_abbreviation] = FN(Finland);RO(Romania);PL(Poland);IT(Italy); SP(Spain); D(Germany), as [sampling_point_of_MSC] the point of sampling. [60] is the abbreviation for (60 cm depth) PERMANENT suction cup. Crucial for database of our laboratory. E.g.: FN_01_01_60
Moved MSC to sampling point	New sampling point to which the MSC device is installed according "Spatial_Sampling_Scheme".
Pressure set up after sampling [bar]	New pressure to which the permanent suction cup device is set up after sampling, should always be 0.5/0.6 bar. Reminder-field.
Marked previous sampling point (no=0/yes=1)	Previous sampling point should be marked (e.g. by a stick). Crucial for parallel measurements which take place later.

Remarks: Any particular occurrences e.g. damaged system/conducted maintenance/assumption of polluted sample can be noted here.

Time needed for A	Fill in the duration of sampling for A, B and C
Time needed for B	
Time needed for C	
Time needed for D	

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**D: Deposition sampler**

Name of Sampler	
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Region	
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Point ID							
Sampler ID							
Date of Sampling							
Time of Sampling							

Pollution in funnel	
(no=0/yes=1)	You find a kind of pollution in the funnel/bottle (bird excrements), please make notes.
Sample used for composite sample	
(no=0/yes=1)	If you cannot find a kind of pollution, the sample can be used for a composite sample.
Sample discarded	
(no=0/yes=1)	If you find a kind of pollution, the sample should not be used for a composite sample
Amount of water in sampler [ml]	Amount of soil solution in every sample bottle. Unit: milliliter. Required accuracy: 10ml
Sum of water of all 3 samplers[ml]	Sum of water of the three sample bottles standing on this sampling point.
Composite sample filled in bottle	This field serves mainly for reminder. Fill in the labeling of bottle, in which you fill the sample (e.g. [Region_abbreviation]_[Point ID]). Use as [Region_abbreviation] = FN(Finland);RO(Romania);PL(Poland);IT(Italy);SP(Spain);D(Germany) and for [Point ID] use Point ID where you find 3 set up deposition samplers. E.g.: FN_01
Sampler and funnel cleaned	Clean up the sampling bottle and the funnel (and the glass) with distilled water before twisting the bottle and funnel together. CAUTION: DON'T TOUCH IN THE FUNNEL, THE GLASS, IN THE BOTTLE (the laboratory will measure the ingredients of rainfall and not the chemical composition of your perspiration)

Remarks:

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## **E: Meteorological Measurements**

CAUTION: sampling scheme instructions will follow after ordering and installing rain gauge samplers