



TREE CORING - A PHYTOSCREENING TECHNOLOGY -

Type of product	Screening Method (more information available in: Guidelines, User manuals, Training course, ISI Papers)
Target group	Consulting engineers, authorities, scientific researchers, students
Availability	Timbre homepage, DTU website, Scientific journals

Purpose: When screening for soil/groundwater pollution, a wide range of technologies can be used. Many of them are costly and resource demanding. Tree coring is a fast, simple and inexpensive screening method which helps to evaluate pollution levels and diffusion.

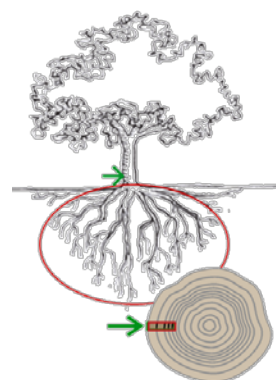
Approach: Trees used as an indicator of subsurface pollution are useful for many pollutants. The pollutants in soil/groundwater are readily taken up by the roots and transferred to plant parts above the soil surface. Tree cores are sampled and analyzed to detect soil/groundwater contamination. One tree core sample represents a large soil volume.

Applicability: As this is a semi-quantitative approach, it should be applied as an initial screening method and, based on the results from the tree coring, followed by focused quantitative screening methods.

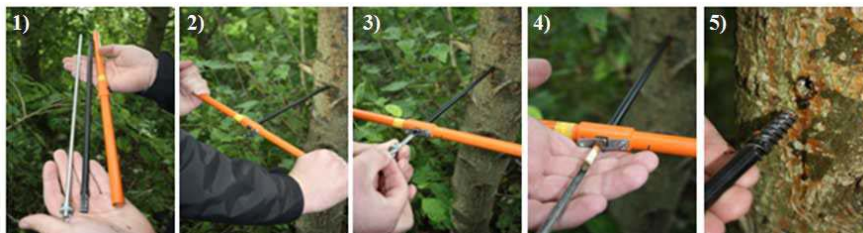
The method presented here has shown to be useful for PCE/TCE screening and for the detection of strong metal pollution (Cd, Cu, Ni and Zn; only in willow trees). Tree coring is still investigated as a screening method for BTEX and MTBE contamination.

Due to the simple equipment needed for sampling, the method will have a minimum impact on the trees, test sites and the site owners.

Key note: Tree coring is an inexpensive and easy method which can be used to focus other more advanced and cost-intensive screening methods, with the overall goal to make site characterization more efficient.



Volume of soil represented by a tree core sample



1) The Suuntu borer: core extractor, borer and handle. 2) Screwing in the borer to the trunk. 3) Insertion of the core extractor. 4) Removing of tree core sample. 5) The tree after sampling.

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