

# Cost-effective measurement of wood extractives for breeding of wood quality (TUIKEPUU)

The aim of this project is to develop and experiment a fast, cost-effective and reliable technology to measure the extractive content of Scot pine heartwood. The RDI activity is based on the collaboration among regional partners in Southern Savonia.



## Research problem:

Stilbenes, naturally occurring extractives in Scots pine heartwood, protect heartwood against fungal decay and deterioration. There is wide, genetically determined variation in stilbene content among the individual trees. Stilbene content is laborious to measure, and the new technique will allow measuring the individual differences fast and reliably.

## Project activities:

- development of the measurement technology and measurement procedures
- enhancement of the RDI activities in collaboration with the partners from 3K-Factory of Electronics and FiberLaboratory (research units of Mikkeli University of Applied Sciences)
- measurement of Scots pine heartwood samples with the new technology, and preparation of its' implementation into tree breeding activities and other applications

## Project impacts:

- enables selective breeding of Scots pine heartwood quality → forest regeneration material having high potential for stilbene production ← selective seed collection from seed orchards
- selection of stilbene-rich Scots pine heartwood for durability-requiring conditions → need for wood-impregnating agents decreases in certain applications
- contributes to new and improved products as well as to material-efficient production techniques, technologies and services for example in chemical industry and in quality control of value-added products
- promotes the establishment of regional RDI infrastructure in Southern Savonia
- could be applied in forest tree breeding and research, and in forest based industries

## Funding:

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