

Baltic Bioenergy and Industrial Charcoal (BalBiC)



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About BalBiC

BalBiC is a renewable energy development project, which aims to develop the use of biocoal in the Baltic Sea region. Biocoal is CO₂ neutral fuel made from wood or other biomass with pyrolysis process.

BalBiC aims to support development of industrial biocoal production and market, as well as the sustainable use of forest biomass. The project focuses on enhancing markets and competitiveness of biocoal in the Baltic region. The target groups of the project are forest owners, entrepreneurs working in the field of wood procurement, bioenergy users, forest industry, municipalities, research centers, universities and colleges.

BalBiC is partly financed by European Union through Central Baltic Interreg IV A Programme 2007-2013 and Regional Council of Southwest Finland. BalBiC is a joint project between University of Helsinki, Forestry Development Centre Tapio and Latvia State Forest Research Institute “Silava”. Department of Forest Sciences, University of Helsinki is the lead partner of the project.

Elemental analysis of biocoal

Background



Pyrolysis changes the elemental composition of biomass. Amount of carbon, hydrogen and oxygen documented in previous studies. Carbon content increases, oxygen content decreases significantly and hydrogen content decreases slightly.

The concentration of other elements (Cl, K, Si, S) in the torrefied wood or charcoal is not well known. Some studies on ash composition have been published.

Aim of the study – determine the amount of K, Cl and other elements in different tree parts and the changes during pyrolysis in different temperatures.

How is it related to the ICP-Forest monitoring data?



We are planning to write scientific publication about changes of chemical content in wood, needles and bark after torrefaction in different temperatures, using the **ICP Forest** foliar and litterfall monitoring data from Latvia, Lithuania, Estonia, Finland and Sweden since 2004 as a reference to estimate if the material used in trials characterizes initial content of certain chemical elements.

Thank you for your attention!



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