

P-018: Resin composition of tapped black pine (*Pinus nigra* var. *austriaca*) recorded by FT-IR

Barbara Hinterstoisser^{1*}, Ena Smidt¹, Thomas Ters², Johannes Tintner¹

¹University of Natural Resources and Life Sciences, Vienna, Department of Material Sciences and Process Engineering

²Vienna University of Technology, Institute of Chemical Engineering

*corresponding author: barbara.hinterstoisser@boku.ac.at

The resin of tapped Black pines (*Pinus nigra*) was investigated regarding changes during the collection process. The influence of the sampling procedures was revealed. FTIR-spectra of appearing resin drops sampled immediately after scratching and removing the bark were recorded. FTIR-spectra were also recorded of resin samples taken from the collecting pot, where the resin was accumulated up to four weeks. The band at 2925 cm^{-1} assigned to C-H ($-\text{CH}_2$) gained intensity from drop to the pot, due to the change in chemical composition of the samples as was verified by GC/MS measurements. The fingerprint region remained nearly unchanged. The most prominent differences in the spectra were found between the fresh drops and some of the samples from the collecting pot in the region between 3400 cm^{-1} and 2800 m^{-1} . The prominent band around 3400 cm^{-1} is attributed to O-H stretch vibration in the fresh drops, being much less prominent in the samples from the collecting pot. These differences can be explained by the different amount of water in the samples. The composition of drop- and pot-samples and their spectra are discussed as well as possible changes in the chemical composition.