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Evaluation of extractives content and its influence in mechanical properties of Albanian black pine (*Pinus Nigra Arn.*)

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ABSTRACT

*This study is focused on extractives content and its influence in mechanical properties, respectively bending and compression strength of Black Pine (*Pinus nigra Arn.*). We analyzed first, the extractives content of 18 sawdust samples, taken from cuts in six different heights of three trees. It has resulted that the content of extractives in the samples decreased from the base to the top of the tree and their content in wood was about 12 %. Secondly, we analyzed the influence of wood extractives content on the static bending and compression strength of Black Pine specimens with the same provenience as the sawdust samples. According to the UNI-ISO 31-33, we tested 160 specimens, all air dried to 12% moisture content, 2x2x32 cm for bending strength and 2x2x4 cm for compression strength. Half of the specimens are extracted in organic extractives first and then in hot water(60 °C). The results showed that in extracted specimens, the average bending strength value for the extracted samples is reduced by 13 % for heartwood and 6% for sapwood and the average compression strength value by 10% and 5%.*

Keywords: Black Pine, extractives content, bending strength, compression strength, tests.
