

Wettability properties of hydro-thermal treated Oriental Beech

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The objective of this research was to investigate the wettability properties of hydro-thermally treated solid Oriental Beech (*Fagus orientalis* Lipsky) wood. The wood samples were subjected to hydro-thermal treatment under saturated steam at 110 °C, 140 °C, 170 °C or 200 °C for 10, 30, 60, 120 or 240 min. The wetting behavior of the wood samples was characterized by the contact angle method (goniometer method). Contact angle (CA) measurements were performed using a CAM 101 Optical Contact Angle meter (KSV Instruments Ltd. Helsinki), equipped with a video camera, which collected one image per second. After the 5 µL droplet of distilled water was placed on the sample surface, contact angles from the images were measured at 1 sec time intervals up to 60 sec total. The statistical analyses showed that contact angle values were increased while increasing treatment duration and temperature. But the differences were more significant at 200 °C and 120-240 min.

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