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Dye Of Waste Tae Extract Wıth Mordant-Varnısh And The Effect Of Color Changes On Wood

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Abstract- This study aimed to develop natural dyes for wood material that are harmless to humans and the environment. For this purpose, a tea stain and polyurethane single- and double-component water based varnish were applied by brush on the wood surfaces of pine (*Pinus sylvestris* L.), beech (*Fagus orientalis* L.), fir (*Abies*), and poplar (*Populus sp.* L.). The color change (*i.e.*, ΔL, Δa, Δb) and total color change (ΔE) of the samples was determined based on the ISO 2470 standard. According to experimental results, the highest color brightness change (Δl: -52.49) was seen in pine wood with tea dye, the highest red color change (Δa: 11.50) was seen in pine wood with tea dye+water-based varnish, and the highest yellow color change (Δb: 97.19) was seen in fir wood with tea dye+borax. The highest value of total color change (ΔE: 99.512) addition of borax fir wood in tea dye is obtained. Developed tea extract to waste paint, furniture processing industry has the aesthetic appearance of surface processes can be used.

Keywords- Tea extract, furniture industry, natural dyes, surface coating, environmental.