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ABSTRACT BOOK
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ULTRASONIC ASSISTED-CLOUD POINT EXTRACTION: AN EFFICIENT AND SIMPLE APPROACH FOR THE PRECONCENTRATION OF SOME HEAVY METALS IN COSMETIC PRODUCTS FOR DETERMINATION BY FLAME ATOMIC ABSORPTION SPECTROMETRY Nail Altunay, Ramazan Gürkan, Sema Korkmaz and Nimet Aydın.....	404
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EFFECT OF CHEMICAL TREATMENT ON POLYESTER MATRIX COMPOSITES REINFORCED WITH CHESTNUT WASTE

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In recent years due to some ecological and environmental apprehension in the fabrication of thermoplastic composites natural fibers have been preferred instead of using inorganic fillers. The increasing demand for thermoplastic composites has led to find new resources. A wide variety of fiber materials are available for the polymer composites such as corncobs, nutshell, pepper stem, cereal straw and even cellulose wastes. One of these materials is chestnut shell. Turkey has a large quantity of chestnut tree in the East Black Sea subsection, the Marmara region, and the Antalya coastal area via the West Anatolia subsection. Aim of this study was to produce polymer matrix composites by using treated chestnut waste as filler and polyester as polymer matrix with casting method. Cobalt naphthenate as accelerator and methyl ethyl ketone peroxide as hardener were used to produce polyester matrix composites. Chestnut powder was treated with sodium hydroxide and acetic acid solution. Polyester amount was kept in constant and chestnut ratios were changed from 3% to 12% in weight. Effect of chemical treatment was investigated by evaluating some mechanical properties such as flexural strength, elastic modulus, hardness and some physical features such as density and water absorption. According to test results using treated filler has decreased the bending strength values in 8% ratio. It was observed that chemical treatment has no significant effect on elastic modulus and hardness values of the composites. While impact strength values have decreased with the increase in chestnut there is an 8.5 % decrement when treated chestnut filler was used.

Keywords: Polymer matrix composites, chestnut wastes, chemical treatment, polyester, mechanical properties

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