

**INVESTIGATION OF LEAD(II) IONS BIOSORPTION
CAPABILITY OF WENGE SAWDUST (*Millettia laurentii*) FROM
AQUEOUS SOLUTIONS**

**Duygu ÖZDEŞ¹, Celal DURAN¹, Ali GÜNDOĞDU¹,
Hüseyin SİVRİKAYA², Hasan Basri ŞENTÜRK¹**

¹Karadeniz Technical University, Faculty of Sciences, Department of
Chemistry, Trabzon

²Bartın University, Faculty of Forestry, Bartın

Abstract

Lead is a particularly hazardous heavy metal because once it gets into human body; it disperses throughout the body immediately and causes harmful effects wherever it lands. Because of this it is important to remove lead and other toxic heavy metal ions from waters and wastewaters before they are released to the environment. Among the various wastewater treatment techniques, biosorption of heavy metals is a promising alternative method due to its high selectivity, easy handling, lower operating costs, high efficiency in removing very low levels of heavy metals from dilute solutions. In recent years, a number of agricultural and forestry by-products such as rice husk, pine bark, technical lignin and cork biomass have been used for heavy metal removal. The advantages of the agricultural and forestry by-products as biosorbents in comparison to other sorbents that they are by-products or wastes from agricultural or forestry processes, and they are already available in large quantities [1]. The aim of the present work was to investigate the possible use of *Millettia laurentii* as an alternative biosorbent for removal of Pb(II) ions from aqueous solutions. The study includes an evaluation of the effects of various process parameters such as initial pH of the solution, contact time, initial Pb(II) concentration, reutilization of the