# INVESTIGATION OF METHYLENE BLUE ADSORPTION FROM AQUEOUS SOLUTIONS BY DRIED LEAVES

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| **ABSTRACT**  With the arrival of autumn each year, the leaves of trees dry up and consequently fall off. The fallen leaves are beneficial for preserving declining wildlife populations. They cover the tree/shrub and plant root systems, maintain soil moisture, prevent weeds, and suppress other plants. They gradually decompose, returning essential nutrients to the plants. However, in landscaped gardens created through landscaping, especially in October, fallen leaves are collected. If not collected, they can cause discoloration in the lawn area and promote fungal growth. These leaves are considered waste and are sometimes disposed of by burning or sent to landfills. In recent years, research has been conducted on the utilization of fallen leaves from various trees. Some of these studies explore various applications such as using leaves as a feed supplement [1] and in paper manufacturing [2]. In this study, the adsorption of methylene blue dye from aqueous solutions by dried *Acer platanoides* leaves was investigated. In experiments conducted at 25°C, the qe value of dried *Acer platanoides* leaves used at 0.5 g/L was found to be 0.4213 mol/kg.  **References:**  [1] Boğa, M, Avcı, B.C., Kılıç, H.N., Civaner, A.G. (2022). Bazı Baklagil Ağaç Yapraklarının Alternatif Yem Kaynağı Olarak Besin Madde İçerikleri ve Sindirilebilirliklerinin Belirlenmesi. *Kahramanmaraş Sütçü İmam Üniversitesi Tarım ve Doğa Derg,* 25(5): 1191–1197.  [2] Sibaly, S., Jeetah, P. (2017). Production of paper from pineapple leaves. *J Environ Chem Eng*i 5(2017): 5978–5986. |

# Keywords: Adsorption, Wastewater, Methylene Blue, *Acer platanoides* leaves, Adsorbent

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