

# **TREATMENT OF METHYLENE BLUE-CONTAINING WASTEWATER USING MICROORGANISMS SUPPORTED ON GRANULAR ACTIVATED CARBON UNDER PACKED COLUMN OPERATION**

## **Abstract**

We studied the feasibility of using biological granular activated carbon-packed column in treating methylene blue-containing wastewater. The granular activated carbon with immobilized microbes was packed into a column and fed with 3 liter methylene blue-containing wastewater daily. With initial 1350 mg/l of methylene blue and 1550 mg/l of chemical oxygen demand, it was observed that the colour and chemical oxygen demand removal efficiencies were 99 and 78%, respectively. The high treatment performance of the system could be due to the simultaneous adsorption and biodegradation processes and advantages of immobilized microbes compare to suspended cell system.

## **Author Keywords**

Decolorization; Granular activated carbon; Immobilization; Methylene Blue; Packed column