

# ADSORPTION OF LEAD AND ZINC FROM AQUEOUS SOLUTION USING *SYZYGium CUMINI L.* AS ADSORBENT

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## ABSTRACT

The capacity of *Syzygium Cumini L.* for lead and zinc removal from aqueous solutions was investigated. The Langmuir, Freundlich, Redlich-Peterson and Temkin adsorption models, were used to represent the experimental data and equilibrium data. It is fitted well with the Langmuir, Temkin isotherms for lead and Langmuir and Freundlich Isotherms for Zinc. The parameters studied are contact time, initial metal concentration, dosage, particle size and pH of the solution. The percentage of removal increases with the increase in pH from 2 to 6 and reaches the maximum when the pH is 6. The contact time is to be 20 min and 10 min for lead and zinc respectively. The lead and zinc sorption process onto *Syzygium Cumini L.* particles tend to follow second order kinetics.

**KEYWORDS:** Biosorption; *Syzygium Cumini.L.*; Adsorption isotherms; Kinetic studies