

# Adsorption of Lead (Pb) from Aqueous Solution using Powdered *Psidium Guajava* (Guava) Leaves as an Adsorbent

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**Abstract:** *Guava leaves are economically cheaper. The contamination of water sources with heavy metals, such as lead, poses a significant threat to human health and the environment. The present investigation was carried out with the aim to assess the potential of powdered guava leaves as an effective adsorbent for the removal of lead from aqueous solution. Various factors affecting the adsorption process including concentration of Psidium guajava leaves and contact time of adsorption process were examined. The result shows that concentration of guava leaves that has good adsorbent was set-up no. 2 with adsorbent dose of 4g. The higher the adsorbent dose, the higher the percentages of lead remove. A contact time of 15 min has a greater adsorption of lead. Shorter the contact time, the higher the percentage of removal. Thus, there is a significant relationship between contact time and adsorption doses of guava leaves, the greater the absorption doses the higher the percentage remove at a shorter contact time. This revealed that Psidium guajava leaves are promising and eco-friendly and could be an economically method for lead removal in aqueous solutions*

**Keywords:** Adsorption, lead, aqueous solution, *Psidium gaujava*

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