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# Oxidation of phenol and the adsorption of breakdown products using a graphite adsorbent with electrochemical regeneration

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oxidation; phenol; graphite intercalation compound.

## ABSTRACT

The process of adsorption using an unexpanded graphite intercalation compound (GIC) adsorbent with electrochemical regeneration has been investigated for the removal and oxidation of phenol in wastewater. During electrochemical regeneration of the adsorbent, the formation of intermediate oxidation products is critical because these could affect the toxicity of the treated effluent. The present study is concerned with the formation of breakdown products released in the treated water during electrochemical regeneration of GIC adsorbents, using phenol as a model pollutant. Batch studies were carried out on a small laboratory scale electrochemical cell and flow-through treatment studies were carried out in a pilot scale

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