

عنوان مقاله:

Removal of Cr (VI) from Aqueous Solution Using Tree Leaves

محل انتشار:

دوازدهمین کنگره ملی مهندسی شیمی ایران (سال: 1387)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

The adsorption characteristics of hexavalent chromium from aqueous solution were investigated, using pistachio and apricot tree leaves (PTL, ATL). The results were compared with conventional method using activated carbon (AC). The experiments were conducted in batch mode to observe the influence of different parameters such as initial concentration of metal ions, adsorbent dosage, pH of the solution and contact time. Adsorption of Cr(VI) was highly pHdependent and the results indicated that the optimum pH for the removal was 2 for all types of adsorbents. The amounts of adsorbed Cr (VI) increased with the increase in initial concentration of Cr(VI), dose of adsorbents and at contact time. The applicability of the Langmuir, Freundlich and Temkin adsorption isotherms was tested. The isotherm equilibrium data well fitted to Freundlich model and results showed that the studied adsorbents can be used as low cost and effective adsorbents for the treatment of wastewaters.

کلمات کلیدی:

pistachio and apricot tree leaves, activated carbon, adsorption, hexavalent chromium, isotherm

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