

Removal of Vanadium from Industrial Effluents by Natural Ion Exchanger

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Abstract : The removal vanadium from aqueous solution using natural exchanger was investigated. The effects of pH, contact time and exchanger dose were studied at ambient temperature (25 ± 2 °C). The equilibrium process was described by the Langmuir isotherm model with adsorption capacity for vanadium. The natural exchanger i.e. tamarindus seeds powder was treated with formaldehyde and sulphuric acid to increase the adsorptivity of metals. The maximum exchange level was attained as 80.1% at pH 3 with exchanger dose 5 g and contact time 60 min. Method is applied for removal of vanadium from industrial effluents.

Keywords : industrial effluent, natural ion exchange, Tamarindous indica, vanadium

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