EVALUATION OF THE INHIBITORY EFFECT OF DANDELION ROOT EXTRACT IN HCL SOLUTION BY STATISTICAL ANALYSIS

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Abstract

In this paper, the influence of steel type, inhibitor concentration, and time on the inhibitory effect of dandelion root extract in a 4% HCl solution was investigated. Two types of steel of known composition were used, and the inhibitory effect was monitored in a time interval of 2, 4, 6, 24 and 48 hours. Dandelion root extract was obtained by the Soxlet method with 96% ethanol, and then dilutions (0.5 g/l, 1.0 g/l and 1.5 g/l) were made from the obtained extract in 4% HCl solution. The optimization of the experimentally obtained results was done using the MINITAB 21 software. The optimal concentration of dandelion roots in 4% HCl solution for inhibitory effect is 1.5 g/l, while time has no great influence on the inhibitory effect because the beneficial effect was achieved already after 2 hours. Also, better inhibition efficiency was observed in steel type 1.

Keywords: *Corrosion, Dandelion roots, Optimization, Inhibitor.*