Electrochemical Noise Analysis of Different Herbal Compounds for Copper Exposed to Chloride Media.

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Four different herbal compounds, Caraway (*CARUM Carvi*), Cumin (*Cuminum Cyminum*), Anise (*Pimpinella Anisum*) and Hibiscus (*Hibiscus Sabdariffa*) have been tested as green corrosion inhibitor for copper exposed to 0.5 M NaCl. The corrosion inhibition has been studied using electrochemical noise (EN) and electrochemical impedance spectroscopy (EIS). The comparative analysis of the results obtained showed that EN is an effective tool for screening of new corrosion inhibitors. Polynomial trend removal method has been used to remove the trend in the potential and current fluctuations during the measurement periods. The results gathered showed very good inhibition efficiency. Generally, EN showed a good correlation with EIS in this study

Keywords: Copper, EN, EIS, Herbal compounds

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