



Corrosion behavior of steel in biodiesel of different origin

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Abstract This study aims to characterize the corrosion behavior of steel by static immersion tests in biodiesel obtained from three different types of vegetable oils (sunflower oil, rapeseed oil and corn oil) at room temperature for 49 days. At the end of the test, corrosion behavior was investigated by weight loss measurements and changes in physical and chemical properties of biodiesel. Biodiesel samples were analyzed to investigate density, dynamic viscosity, acidity index, refractive index and saponification index. Results showed that under the experimental conditions, steel was more susceptible to corrosion in biodiesel from corn oil as compared to biodiesel from sunflower oil and rapeseed oil.

Keywords: carbon steel, biodiesel, sunflower, rapeseed, corn oil.
