Title: Inhibition Effect of Extracts of Carica Papaya and Camellia Sinensis Leaves on the Corrosion of Duplex (α β) Brass in 1M Nitric acid.

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Date: 2011

Abstract: The effect of C. Papaya (pawpaw) leaves and C. Sinensis (tea) extracts as an organic „green“ inhibitor on the corrosion of α β (duplex) brass (65-35% Cu-Zn alloy) in 1MNO3 (nitric acid) was studied at ambient temperature. Weight loss/corrosion rate and potential measurement techniques were used for the experimental work. The tea extract was obtained from the green tea leaves. The results obtained showed effective corrosion inhibition of the extracts on the brass test specimens in the 1M nitric acid used. The different combined extracts concentrations also gave good corrosion inhibition performance. They also exhibited effective corrosion reactions synergism. The test specimen (duplex brass) gave some appreciable corrosion resistance in the test environment.