

Study of Some Aromatic Thiourea Derivatives as Lube Oil Antioxidant

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Abstract : In the present work, some lube oil antioxidants based on ester of some aromatic thiourea derivative were prepared by two steps: the first step is the reaction of succinyl chloride with ammonium thiocyanate in addition to anthranilic acid as three component system to prepare thiourea derivative (A); the second step is esterification of compound (A) by different alcohol (decyl C₁₀, tetradecyl C₁₄, and octadecyl C₁₈) alcohol. The structures of the prepared compounds were confirmed by infra-red spectroscopy, nuclear magnetic resonance, elemental analysis and determination of the molecular weights. All the prepared compounds were soluble in lube oil. The efficiency of the prepared compounds as antioxidants lube oil additives was investigated and it was found that these prepared compounds give good result as lube oil antioxidant.

Keywords : antioxidant lube oil, three component system, aromatic thiourea derivatives, esterification

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