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## Thermal degradation of two tung oil based reactive diluents and linseed oil alkyd

Satilmis Basan<sup>1</sup> and Mark D Soucek<sup>2</sup><sup>1</sup>University of Hittite, Turkey<sup>2</sup>University of Akron, USA

Thermal degradation of two tung oil based reactive diluents, linseed oil alkyd and different amounts of two reactive diluents having paint formulations were investigated using TGA and DSC under non-isothermal conditions and dynamic nitrogen atmosphere and air. Activation energies were obtained from Freidman method and Freeman-Carroll method and subsequently the pre-exponential factor 'A' and reaction order 'n' for reactive diluents and alkyd were also determined according to general rate equation. From kinetic analysis of the thermal degradation of using TGA, it was founded that thermal degradation of two diluents and alkyd has taken place in one stage but thermal degradation of all paint formulations have taken place in more than two stages. As shown from Freidman method and Freeman-Carroll method, the chemical composition and atmosphere of reactive diluents influenced the thermal degradation. Increasing reactive diluents decreased slightly the thermal stability of linseed oil alkyd.

### Biography

Satilmis Basan has completed his PhD from Hacettepe University and Postdoctoral studies from Glasgow University, Department of Chemistry and Akron University, Department of Polymer Engineering. He is the Head of Department of Chemical Engineering, Founder Dean of Faculty of Engineering at Hittite University and Editor in Chief of Journal of the Turkish Chemical Society, Section B: Chemical Engineering. He has published more than 24 papers in reputed journals.

satilmisbasan@hitit.edu.tr

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