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## Kinetic Study of Non-Isothermal Decomposition of Copolymer Resin Derived from 2, 4-Dihydroxypropiophenone, 1, 5-Diaminonaphthalene and Formaldehyde

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### Abstract

The copolymer 2,4-DHP-1,5-DANF have been integrated by the build up of 2,4-dihydroxypropiophenone, 1,5-diaminonaphthalene with formaldehyde within the sight of 2M hydrochloric acid as an impetus with 2:1:3 molar extent of responding monomers. The structure of copolymer has been clarified by different physico-concoction and otherworldly systems, for example, natural examination, UV-visible, FT-IR, 1H-NMR and non-watery conductometric titration. The warm deterioration example and its energy were examined by thermo gravimetric examination (TGA) in a static nitrogen environment at a warming rate of 10°C/min. The SW and FC strategies have been embraced to assess the energy and thermodynamics parameters, for example, the warm enactment vitality ( $E_a$ ), request of response ( $n$ ), entropy change ( $\Delta S$ ), energy change ( $\Delta F$ ), obvious entropy change ( $S^*$ ) and recurrence factor ( $Z$ ). The order of disintegration response was found to 0.96. The energy of thermal activation dictated by these strategies are in close concurrence with one another.

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