473e Rheological Characterization of Nc Gels and Development of Processing Simulants

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The rheological behavior of energetic formulations based on nitrocellulose depend strongly on the type of NC used in the formulation and how the process is conducted. Here various rheological characterization methods were developed to characterize the linear viscoelastic properties of NC gels as a function of the solvent concentration. Thirteen different NC samples were included in the analysis. Furthermore, various types of processing simulant gels were developed to allow adequate testing of processing equipment designed to run the live NC formulations.