

Abstract

Nitrocellulose is the basic component of many types of propellants and explosives. The methodology for the production of nitrocellulose have not changed since 19th century. The character of nitrocellulose effects the end product behavior. The objective of this research work was to develop a method with the help of which we could produce the nitrocellulose of low viscosity. Nitrocellulose was dissolved in acetone and ethyl acetate, viscosities at different concentrations were measured with the help Brookfield viscometer. FTIR spectra helped out to characterize the nitrocellulose. Three bands of nitro group observed at 840 cm^{-1} , 1250 cm^{-1} and 1670 cm^{-1} , corresponds valance stretching, symmetric stretching and anti-symmetric stretching of nitro group respectively. Other factors that effect the viscosity like nitrogen content, acidity fiber length and solubility were also studied.