

Pembuatan nitroselulosa dari berbagai pulp larut komersial sebagai bahan baku propelan=Making of nitrocellulose from various commercial dissolving pulps as propellant raw materials

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20419009&lokasi=lokal>

Abstrak

One effort to overcome the limited cotton is the use of dissolving pulp with high α -cellulose content. The aim of this research is to study the nitration process of cellulose (PNC). The most important parameter in the preparation of propellant is nitrogen level, which should be higher than 12,75%. The dissolving pulps from softwood sulfite process (A), Hardwood kraft process (B), and hardwood sulfite process (C) were pre-treated before nitration process, namely ball mill, willey mill, and blender. Nitrocellulose was made using two types of formulas, which were formula one (HNO_3 ; HNO_3 fuming; $\text{H}_2\text{SO}_4 = 1 : 3 : 12$) and formula two (HNO_3 ; HNO_3 fuming; $\text{H}_2\text{SO}_4 = 1 : 1.24 : 4$). The results showed that the preparation of nitrocellulose from dissolving pulp A using blender pretreatment and formula two provided the highest nitrogen level (14.05%). The burn test of nitrocellulose met the smokeless specifications. Furthermore, the functional groups test by FTIR showed the presence of nitro group