Levulinic acid production form cellulosic biomass by acid catalyzed hydrolysis at high reaction temperature

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MTHF(methyltetrahydrofuran) is an organic compound with the molecular formula . It is a highly flammable mobile liquid. It is derived from sugars via levulinic acid(LA) and is occasionally touted as a biofuel. MTHF can be a new solution and it can be mixed with gasoline up to 30% and can be an alternative to THF.
An in-depth experiment study on the glucose(cellulosic biomass) decomposition in acid catalyzed hydrolysis from 170℃ to 210℃ was conducted.
The main decomposition products were 5-HMF, LA, acetic acid formic acid and unidentified soluable compound(USC). They are derivated form cellulose, hemicellulose and lignin which are main components of lignin cellulosic biomass(Oak wood in this study). In order to reduce USC and evaluate kinetic analysis, it is necessary that lignocellulosic biomass needs to be pretreated with cellulose highly.
This study was performed for comparison of LA production characteristic fo raw and preteated cellulosic biomass at high reaction temperature.
Keyword: Glucose decomposition, 5-HMF, LA