

# Characterization and coagulation performance of poly ferric silicate sulfate from rice husk ash

## Abstract

Rice husk ash which mostly made up of silica is valuable material for use in industrial applications including production of sodium silicate. Different methods to extract  $\text{SiO}_2$  from rice husk ash was conducted and the best method was used to prepare poly ferric silicate sulfate coagulant. The prepared coagulant was characterized by using FTIR and SEM. In the coagulation-flocculation process, poly ferric silicate sulfate prepared shows better coagulation performance compared to commercialized polyacrylamide in terms of turbidity removal at three levels of turbidity.