

## Hydrogen generation from sodium borohydride using Co-B powder catalyst

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Generation of hydrogen via the hydrolysis of sodium borohydride ( $\text{NaBH}_4$ ) solution in the presence of metal catalysts is a promising method for hydrogen storage. For hydrogen generation from a  $\text{NaBH}_4$  solution, Co-B catalyst was prepared by the chemical reduction method using  $\text{NaBH}_4$  and  $\text{CoCl}_2$  as a reduction chemical. The characters of Co-B catalyst were studied by using scanning electron microscopy (SEM), nitrogen adsorption-desorption, FT-IR, and energy dispersive spectroscopy (EDS). Effect of solvent compound ratio, feeding rate of solvent and amount of catalyst loading on hydrogen generation rate were investigated. Solvent dissolving  $\text{NaBH}_4$  was Methanol (MeOH), 5wt% NaOH solution, and mixture. We were used to pump for feeding solvent in reactor. The pump rate was between 1 ml/min and 100ml/min.