

Synthesis of High Purity Aluminum Ethoxide from Used Aluminum Cans

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Aluminum ethoxide (AE) was synthesized to a high purity grade through dissolution a reaction and vacuum distillation from used Al cans(UACs) as a reactant under the condition of 3mol C₂H₅OH/mol Al of stoichiometric ratio, adding 10-3mol HgI₂/mol Al for catalyst and 0.5mol xylene/mol Al as a solvent for the control of reaction temperature. The UACs were cut into small pieces and heat-treated at the condition of 600°C to remove lots of kinds of impurities existing on and in the UACs. Using the pretreated UACs, the high purity AE was synthesized and analyzed quantitatively by complexometric method. As the results of experiment, the reaction gave a 99.1% purity and 75% yield corresponding to the total amount of Al existing in the pretreated UACs.