

Generated gas Analysis of Lithium Ion Battery

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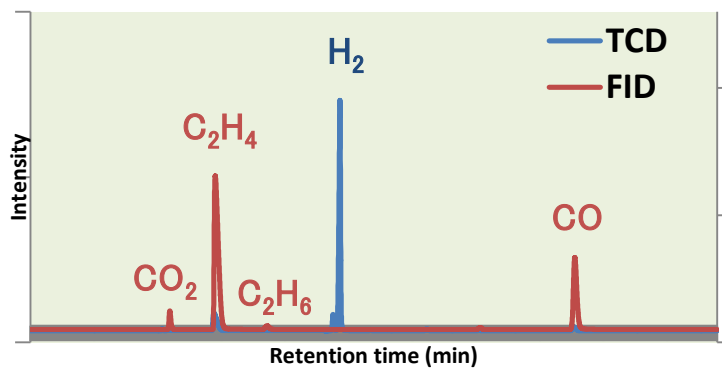
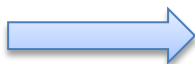
There are concerns with generating various gases from LIB containing organic solvents. Toray Research Center, Inc. is able to manufacture LIB by way of trial and totally analyze and evaluate including gas analysis.

Trial production LIB



laminated winding type

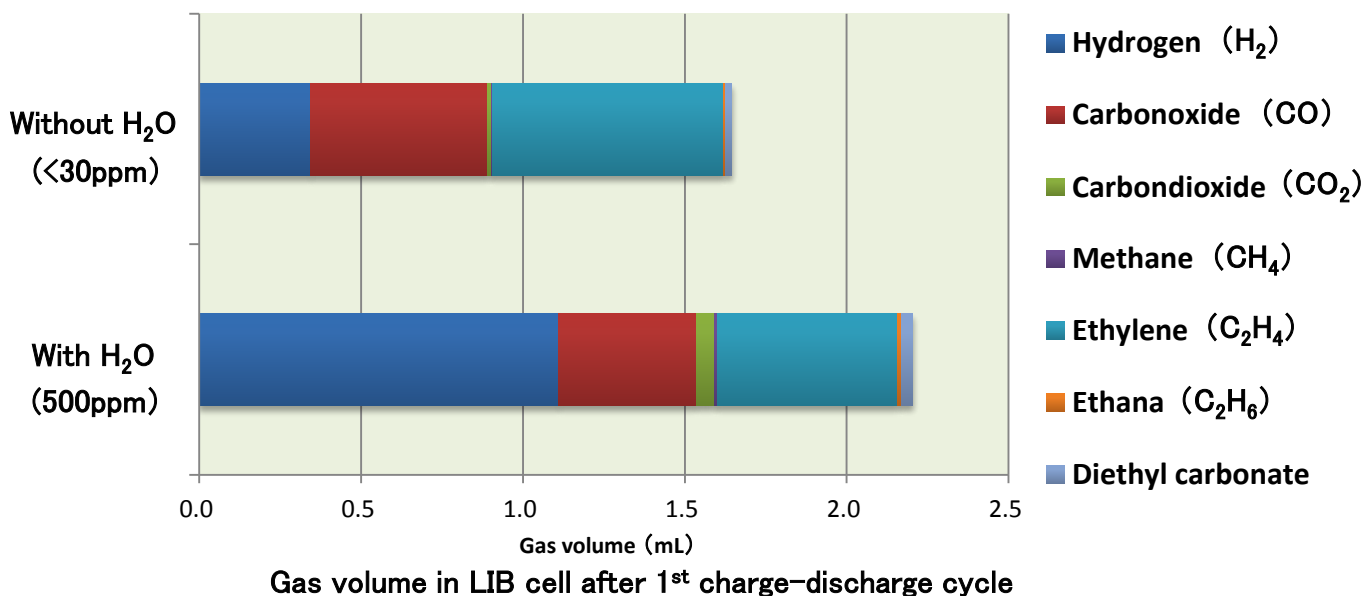
Gas sampling under inert atmosphere



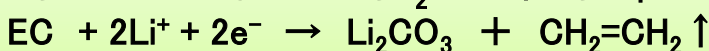
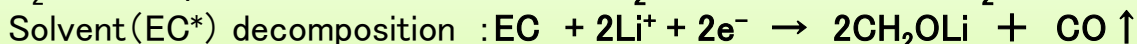
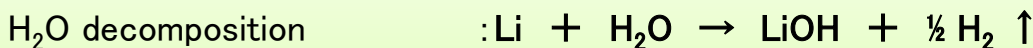
Gas chromatograph of generated gas in LIB

Effect of H₂O for gas generation in 1st charge-discharge cycle of LIB

Generated gases from the trial LIB after the first charge and discharge cycle were analyzed by GC and GC/MS. Two LIBs which are composed of the dehydrated and the not dehydrated components were prepared.



Gas generation mechanism



*EC: Ethylene carbonate