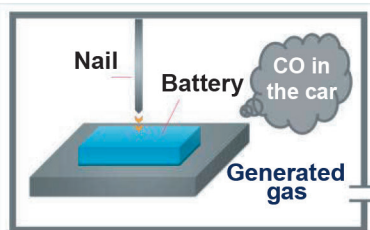




REAL-TIME MEASUREMENT OF GENERATED GAS FROM SAFETY TESTING OF RECHARGEABLE BATTERIES

Background

Lithium-ion batteries (LiB) are widely used in many familiar products due to their high capacity and lightweight. Conduction various battery tests ensure safety, which avoids accidents involving smoke and fire. Analysis of gases generated during safety tests provides useful information on the safety of the products and the development of battery materials. In this section, we featured some examples of real-time analysis of gas components that are generated during safety tests.



◀ In-vehicle CO measurement in battery nail penetration test



◀ Battery heating test



◀ A color trend graph that displays measurement results in real time (image)

Measurement Examples

As part of the safety evaluation for the development of electric vehicles (electric and plug-in hybrid), HORIBA analyzers are used. For the nail penetration test for lithium-ion battery inside the vehicle to measure any inflow of CO gases. During the heat tests to measure the real-time the concentration of CO and CO₂.

Detailed analysis of the composition of the generated gas is done by gas chromatography and other methods. When a portable gas analyzer is used in conjunction with a heating test or nail penetration test, the gas generated during the test can be measured in real-time. This contributes to the research of the behavior under abnormal conditions and the formulation of battery replacement cycles.

HORIBA's Solutions

Portable Gas Analyzer PG-300 Series Features

- Support measurements in the field with even greater functionality and portability.
- Intuitive LCD display with color touch panel for easy operation
- Up to five components can be analyzed simultaneously.



Multi-Component Gas Analyze VA-5000 Series

HORIBA provides other continuous measurement of components other than those listed above. Please do not hesitate to contact your nearest sales representative or sales office.



Portable Gas Analyzer PG-300 Series



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