

# Press Release

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## **A new road using TOC Determination of CO<sub>2</sub> concentrations in beer**

**Suitable for routine analysis in mass production /  
Selective, straightforward to operate, easy to automate /  
Cooperation between Shimadzu and König Brewery**

Shimadzu, one of the world leaders in analytical instrumentation, has developed a new routine procedure for the determination of CO<sub>2</sub> in beverages together with the König Brewery in Duisburg, Germany. Compared with conventional procedures, this new analytical method is more selective, easier to operate and easier to automate and is ideally suited for use in routine analysis in large capacity breweries.

Carbon dioxide is an important player in the production of beer. It originates, in its natural form, during fermentation and is crucial for the shelf-life and the freshness of beer. A constant CO<sub>2</sub> concentration ensures, among others, a consistent taste and constant quality. Therefore, the aim was to develop the most accurate determination of carbon dioxide which is suitable for routine analysis.

The conventional analytical procedures, such as titration or manometric methods are very time-consuming due to lack of automation, and also not very selective. The Shimadzu TOC-V<sub>CPH</sub> is an excellent alternative. Using the IC (Inorganic Carbon) function, the carbon dioxide concentration present in the form of carbonates is determined very accurately. Based on the relatively high CO<sub>2</sub> concentration (4 – 6 g per litre beer), the integrated dilution function of the TOC-V analyzer is very useful. This enables full automation of the procedure in connection with the ASI-V autosampler.

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