CO_2 measuring system

Both, taste and shelf life of the product are affected by the amount of CO_2 dissolved in the product.

A reliable measuring method is the basis for maintain-ing a uniform carbon dioxide content in beer, carbon-ated water and soft drinks.

The demand for an accurate and user independent CO_2-measurement device led to the development of the auto-matic Steinfurth CO2MS.

Description

Based on the laws of Henry and Dalton, the concen-tration of CO_2 dissolved in a liquid can be determined in a closed package by measuring the pressure and tempera-ture when a state of equilibrium between the gas and the liquid phase exists

The CO2MS accurately computes the CO_2 by using these measurements in conjunction with the particular product CO_2-formula.

A state of equilibrium is achieved in our process by evenly rotating the bottle in a vertical orientation for a short period of time prior to performing the measure-ment.

The overhead tumbling of the beverage packages pro-vides an optimal equilibrium phase for accurate calcula-tions of the CO_2 content.

The Steinfurth CO2MS combines the perfect sample preparation with accurate measurement.

Features

- Extremely repeatable results
- User independent automatic operation
- Optimal automatic sample preparation
- Low maintenance requirements
- Easy checking and calibration
- Suitable for all packaging & beverage types
- Simulation of the beverage consuming situation
- Easy operation
- Simmulatanious sample preperation and measurement
- Quick return on investment

Technical specifications

Package type
Bottle or can

Duration of 1 measuring
approx. 1 to 2 minutes

Data output
RS 232 & Ethernet

Power supply
230 VAC / 115 VAC

Accuracy (pressure)
+/- 0,03 bar (0,44 PSI)

Accuracy (temperature)
+/-0,3 °C (0,54 °F)

CO2 repeatability
+/- 0,05 g/l (0.,025 vol)

Max. pressure
10 bar (145 PSI)

Versions

Model CO2MS- 1

The PK 1, fitted with analogue manometer, displays the equilibrium pressure at the end of the shaking process.

The temperature needs to be measured with a thermometer and the carbon dioxide content read off a CO_2-chart, or calculated manually.

Model CO2MS- 2

The PK 2, fitted with a high precision digital manometer, displays the equilibrium pressure at the end of the shaking process.

The temperature needs to be measured with a thermometer and the carbon dioxide content read off a CO_2-chart, or calculated manually.

Model CO2MS- 2C

The PK 2C, measures pressure and temperature simultaneously, calculates the CO_2-content and dis-plays all three parameters on the LCD. The last CO_2-measurement result is retained in the memory even after the device is switched off and can be recalled any time.

Model MK 6 (smart CDA)

The MK 6 measures pressure and temperature simultaneouslyand transfers these results to the base unit.

The measurement procedure, including preliminary shaking, head pressure release, procedure “breaks” and measurement is fully automated.

The micro controller in the base unit not only calculates and displays the carbon dioxide content on the touch screen, but also writes all the data in form of a measurement test report into the internal memory.

The measurement results content CO2-result, pressure, temperature, date, time, identification code of the measuring head and sample ID code.

One input possibility for individual customized sample ID codes is possible via barcode scanner. The measuring data can be transferred from the system via RS 232 or network interface directly into the evaluation software or customized IT system.

Accessories

Bottle-/ Can Insert / PET-Neck Holder

Software / PC-Cable

Barcode Scanner