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Headspace Gas Analyzer GB-DK1

Introduction

The headspace gas analyzer uses a destructive puncture detection method, and through the configuration of high-precision oxygen sensors and carbon dioxide sensors, it can accurately detect the O2 and CO2 content of hollow packaging containers such as packaging bags, bottles, and cans. The analysis of the content of packaging headspace gas can make reasonable judgments on product quality, the effectiveness of shelf life prediction, and the rationality of packaging design. At the same time, it can also be used as a means of packaging sealing detection. It is the best choice for the detection of residual oxygen in the headspace of modified atmosphere (MAP, CAP) packaging, large infusion bottles (bags), pre-filled needles, residual oxygen in vials, and various types of food and medicines that need to detect residual oxygen results.

Nowadays, headspace gas analyzer has become an important means to inspect the quality of packaging design and one of the important methods to verify the shelf life of products. Our headspace gas analyzer GB-DK1 can quickly detect O2 and CO2 content in production lines, warehouses, laboratories and other places to guide production.

Test principle

The gas in the sample is extracted into the sensor through a vacuum pump. The sensor outputs the current and voltage signals of the O2 and CO2 (optional) concentrations in the gas in the sample in real time. The instrument calculates the O2 and CO2 contents in the gas by obtaining the current and voltage signals output by the sensor. After reaching the end condition of the experiment, the test stops, and the instrument records the concentration of O2 and CO2 in the measured gas in the sample.

Specification

Item	Parameter	
Gas to be Measured	O_2 (standard configuration)	CO_2 (optional)
Measurement Principle	Fluorescence optics	infrared absorption

Measurement Range	0%～25%	0%~100%
Measurement Accuracy	±0.2%	±2%
Sampling volume	⩾5 mL (standard atmospheric pressure)	⩾20 mL (standard atmospheric pressure)
Dimensions	350 mm (L)×330 mm(W)×200 mm(H)	
Power Supply	220 VAC±10 % 50Hz/120 VAC±10 % 60 Hz	
Net Weight	5kg	

Features

- High-precision sensors are used, which have high accuracy, good stability, long-term operation and long service life. The over-range automatic protection function can avoid damage to important sensors when the instrument fails.
- Needle/probe safety holsters are used to ensure safe testing and fast sampling.
- Oxygen and carbon dioxide can be detected at the same time, and carbon dioxide gas can be optionally selected for analysis according to different user needs. The minimum sampling volume is 3 mL.
- Built-in operating system, the system is equipped with an ARM control system to control the host through a touch screen (the detection equipment and control software are combined into one); at the same time, the system

can be expanded, such as connecting to the laboratory LIMS system, etc.

- The software is designed according to the requirements of the computerized system of the new version of the GMP Appendix, and users are divided into multiple levels such as operators and administrators (such as administrators, operators, observers, etc. but not limited to these levels).
- It has an audit tracking function, which can realize the audit tracking of the system, project operation, and method, ensuring the security and integrity of the test data.
- Personalized test report settings, the report module to be displayed can be set, and the report in PDF mode can be output. The micro printer can print the test report in real time.