ACETALDEHYDE ANALYZER

GC-IMS: THE ACETALDEHYDE - ANALYZER

INTRODUCTION

Acetaldehyde (C_2H_4O) is an organic chemical compound, commonly used in various manufacturing facilities or chemical plants as raw material, intermediate or final product. It can cause serious damage on human health and is classified as a group 1 carcinogen (International Agency for Research on Cancer, IARC).

Nevertheless, acetaldehyde is indispensable in many industrial processes, especially as a basic material for the chemical synthesis in the production of acetic acid, acetic anhydride, butadiene, acrolein or pentaerythritol. Moreover, it is an essential ingredient in several chemical products. As a plasticizer for synthetic materials it occurs for example in PET bottles, having beside the health risks a negative impact on the taste quality. In addition, acetaldehyde occurs in binding agents for coatings, perfume, fuel, as a preservative and in the production of fire resistant paint, paper or explosives.

With its GC-IMS device G.A.S. developed a highly selective and sensitive measuring system for rapid monitoring of acetaldehyde down to the low ppb range.

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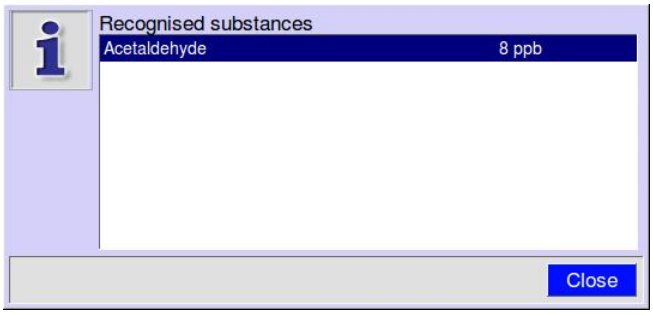
GC-IMS ACETALDEHYDE-ANALYZER

The GC-IMS combines the high selectivity of a gas chromatographic (GC) separation with the extraordinary sensitivity (low ppb_v or µg/L range) of an ion mobility spectrometer (IMS). Therefore it is an excellent analytical tool, even for measurements in complex matrices.

The GC-IMS carries an in-system computer unit that can be operated as a stand alone device. It shows a very user friendly interface through a self explaining menu. Operational steps as well as settings of a measurement are visualized on the 6.4" TFT and can be executed or changed through a touchscreen display. The system can be run as online monitoring device same as in manual mode.

OVERVIEW GC-IMS – KEY FEATURES

- Continuous monitoring of acetaldehyde down to < 5 ppb
- Stand alone operation due to integrated computer unit
- Automatic operation including data acquisition, analysis and data export
- Adjustable alarm thresholds
- Comprehensive self-monitoring check-up features
- Integrated hardware watchdog to control hardware failures



SPECIFICATIONS

Measuring technique	2-dimensional separation by GC-IMS
Detection limit	< 5 ppb
Cycle time	< 5 min (depending on matrix)
Calibration range	Depending on critical value
Sampling	Integrated pump
Display	6.5“ TFT Tochscreen
Dimensions	449 x 435 x 177 mm (WxDxH)
Weight	15.5 kg / 34.2 lb
Power	100 – 240 V AC, 50-60 Hz (external) 24 V DC / 9.2 A, XLR-connector (internal)
Data output options	Device display, current loop, Modbus-TCP 2, USB
Data storage	SSD

G.A.S. Gesellschaft für analytische Sensorsysteme mbH
Otto-Hahn-Straße 15, D-44227 Dortmund, Germany
✆: +49 231 9742 6550 / F: +49 231 9742 6555
✉: info@gas-dortmund.de / ☞ www.gas-dortmund.de