Information on GC-UV INSCAN 178 Gas System

Labio GC-UV INSCAN Series

GC-UV INSCAN 178 makes untargeted analysis targeted.

Perform chemical analysis within a few minutes of air samples with GC-UV INSCAN 178

The GC-UV INSCAN 178 is a cutting-edge device that revolutionizes chemical analysis by providing rapid results for lair samples within minutes. Its advanced technology combines gas chromatography (GC) with ultraviolet (UV) detection, ensuring accurate and precise measurements of various chemical components.

Labio GC-UV INSCAN 178

Precision detection and identification with high sensitivity of air samples within minutes

n both environmental and industrial settings, the analysis of air quality goes beyond the detection of common pollutants such as NOx, CO2, and SOx. It becomes essential to employ advanced air analysis techniques that can detect and identify a wide range of substances. The GC-UV method of analysis offers a comprehensive solution for such applications, ensuring a thorough assessment of air composition.

In today's world, where environmental concerns are paramount, it is crucial to monitor and understand the presence of various pollutants and compounds in the air. The GC-UV technique, applicable to both environmental and industrial contexts, provides a versatile approach to air analysis.

By utilizing the GC-UV INSCAN 178, researchers and analysts can gain valuable insights into the air quality of specific environments. This advanced gas chromatograph not only detects common pollutants but also enables the identification of a broad spectrum of substances. From volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) to hydrocarbons and odorants, the GC-UV method can uncover a wide array of compounds that may pose risks to human health, the environment, or industrial processes.

Moreover, the ability to detect and quantify these substances in the air is vital for environmental assessments, regulatory compliance, and industrial safety. The GC-UV technique offers both qualitative and quantitative results, empowering analysts to make informed decisions based on reliable data.

Whether in environmental monitoring, industrial emissions control, or occupational health and safety, the GC-UV method for air analysis proves invaluable in assessing the presence and potential impact of a diverse range of compounds. It helps ensure a thorough understanding of air quality, enabling targeted mitigation strategies and informed decision-making to protect human well-being and the environment.

Full-scan analytical method for chemical compounds not limited to a few substances.

Sensitivity in air analysis

The air analysis method offers proven sensitivity, allowing for the detection and identification of unknown substances in a sample. It provides comprehensive qualitative information, revealing the identity and chemical class of these unknowns.

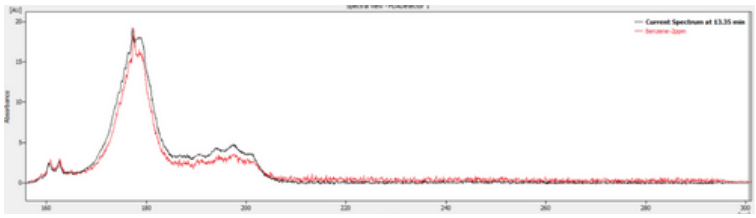
Autosampler and continous analysis

With an autosampler, analysts can automate the sample introduction process in GC analysis. Instead of manually injecting samples, the autosampler precisely draws a predetermined volume of the sample from vials or containers and introduces it into the GC inlet. This automated technique streamlines the analysis workflow, reduces the potential for human error, and enhances overall efficiency.

156-320 nm
Very high sensitivity
Very high selectivity
Very stable without required frequent major calibration
Easy to use
Mobile and compact

90% of the maximum absorptions are observed at wavelengths below 200nm..

Precision detection and identification with high sensitivity

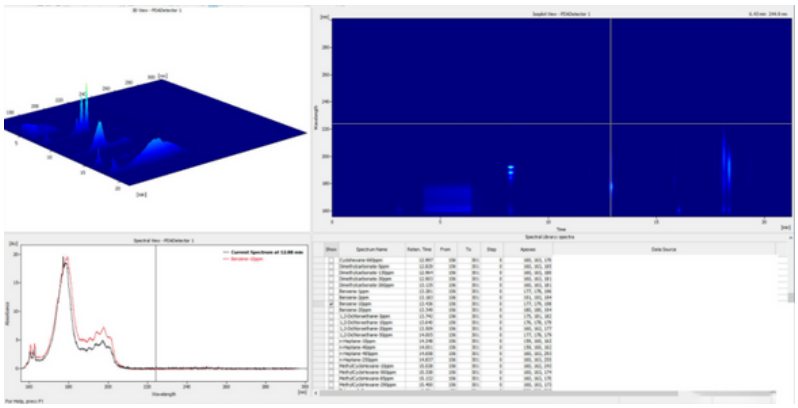


- Benzene, 2ppm
- Current Spectrum

Gas chromatography -UV spectrophotometry (GC-UV) is a full scan analytical method, where the compounds eluting from a gas chromatographic column are continuously monitored. The method belongs to the same categories as gas chromatography mass spectroscopy (GC-MS) and gas chromatography Fourier transform IR (GC-FTIR).

The sensitivities are very high both concerning detection limits, identification limits and classification limits. Selective analysis can be carried out for most of chemical classes like aliphatic aldehydes, pyridines, naphthalenes etc.

UV-spectra in the vapor phase are very well defined, which is the bases for the identification. Computer based search for unknowns against a reference library is very well suited for identification as well as for classification of unknowns. UV-spectra are also visually well suited for fast identification/classification.



Substance identification can be done both by retention time given by the chromatograph and by the characteristic absorption spectra given by the detector. UV-spectra in the vapor phase are very well defined, which is the bases for the identification. Computer based search for unknowns against a reference library is very well suited for identification as well as for classification of unknowns.

GC-UV's ability to detect a wide range of compounds, from volatile to semi-volatile, makes it an invaluable tool in diverse fields such as pharmaceuticals, environmental analysis, forensics, and more. The high selectivity and sensitivity of GC-UV empower scientists to uncover trace-level impurities, ensuring the utmost data integrity and quality in their analyses. With its versatility and robustness, GC-UV is a go-to technique for researchers and analysts who seek comprehensive and reliable compound analysis.

Quantitative and qualitative chemical analysis of air samples

Our system identifies and measures the quantity of each substance in an air sample.

The new Gold Standard

The Labio GC/UV instruments incorporate state-of-the-art intelligent features that minimize downtime and ensure uninterrupted operation. With advanced diagnostics and self-monitoring capabilities, the instruments proactively detect and resolve issues, minimizing the need for manual intervention and reducing the risk of unexpected breakdowns. This intelligent technology not only saves valuable time but also enhances instrument reliability and extends the lifespan of the system.

Use outside laboratory environment

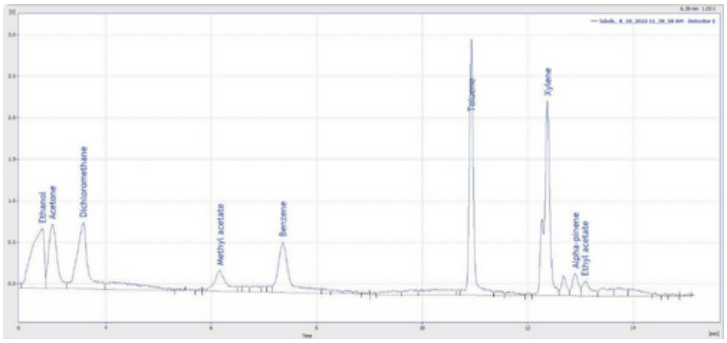
The instrumental construction is relatively simple and compact giving possibilities for making analysis in close connection with the sampling site. This possibility is simplified by the low demand for a laboratory infrastructure. The simplicity also gives short start up time as well as relatively low instrumental cost.

Air Quality results within minutes

Air quality plays a crucial role in maintaining human health, environmental sustainability, and overall well-being. Monitoring and assessing air quality is essential to identify potential risks, implement effective mitigation strategies, and ensure compliance with environmental regulations. Understanding the presence and concentration of various chemical compounds in the air is key to evaluating air pollution levels and their potential impact on human populations and ecosystems.

Worlds fastest GC measurement

the Labio GC/UV instruments offer optimized run times, allowing for faster analysis without compromising data quality. The intelligent algorithms and efficient sample handling mechanisms enable swift sample injection, precise separation, and rapid detection, resulting in shorter analytical cycles. By accelerating analysis times, labs can increase throughput, process more samples, and deliver results in a timely manner, thereby improving overall productivity.



Volatile Organic Compounds (VOCs)

VOCs encompass a wide range of carbon-based compounds that readily vaporize at room temperature. They are emitted by various sources, including industrial processes, solvents, paints, cleaning products, and vehicle emissions. Some VOCs, such as benzene, toluene, and formaldehyde, are known to have harmful effects on human health and the environment.

Perform chemical analysis within a few minutes of liquid samples with GC-UV INSCAN 178

The GC-UV INSCAN 178 is a cutting-edge device that revolutionizes chemical analysis by providing rapid results for air samples within minutes. Its advanced technology combines gas chromatography (GC) with ultraviolet (UV) detection, ensuring accurate and precise measurements of various chemical components.

This information is subject to change without notice.

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