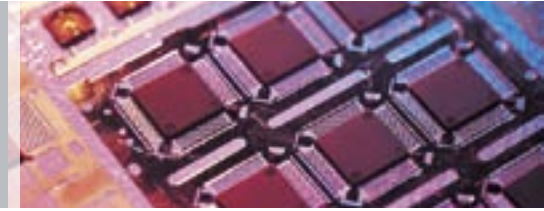




**Frequently asked
questions about
Chemcassette®
toxic gas detection**

Frequently Asked Questions



Q. What is a Chemcassette®?

“Chemcassette®” is the unique trademarked name for a calibration free toxic gas detection method that uses an optical scanning system to detect the presence of gas by a color change on the specially chemically impregnated paper tape. Chemcassette® technology is highly specific and reacts extremely fast to the presence of parts per billion (ppb) levels of many hazardous gases. Over 200,000 points of gas detection are currently maintained by the Chemcassette® sensing technology at any given time around the world in some of the most critical safety applications possible.

Q. Where can I buy Chemcassette® product?

Only Honeywell Analytics’ authorized sales and service representatives can supply the unique Chemcassette® product line. Only Honeywell Analytics designs, manufactures, sells and supports Chemcassette® products.

Q. What support do I get when I buy a unique Chemcassette® product?

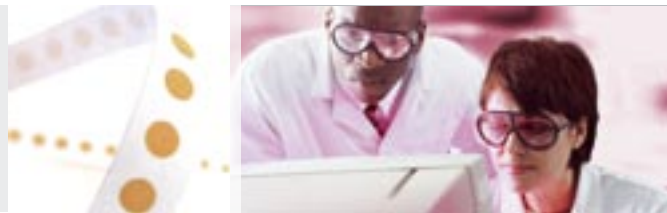
Each MDA Scientific Chemcassette® is manufactured to traceable ISO 9000 manufacturing standards by a world class team of highly trained chemists and each batch is calibrated with ultra pure gas that is traceable to nationally accepted standards. This means that the end user does not have to provide calibration facilities themselves thereby saving cost and reducing risks to their own staff. Efficient high volume manufacturing techniques means that there is always available Chemcassette® in stock that can be shipped anywhere in the world so that our customers are never left without adequate safety cover. Application support with expert gas detection chemists is available by phone and e-mail and is supported with many years of technical application notes and help to diagnose common support issues. Should there be any concern regarding the performance of an individual Chemcassette®, a free of charge evaluation will be performed to trouble shoot the observed scenario using the award winning

quality management system “Customer Discrepancy Report” CDR. Every CDR completed by a customer is guaranteed a full response and the outcome is reported directly back to the end user to ensure a complete resolution process. Each Chemcassette® is backed with a full warranty and we have over 20 years of experience regarding the quality control of our proven sensing technology.

Q. What statistics prove the benefits of Chemcassette® technology?

Honeywell Analytics has been manufacturing their unique Chemcassette® sensor tapes for over 25 years and maintain traceable records on every production batch, every calibration and every instrument and calibration gas cylinder used to perform the calibration. Experienced scientists maintain a constant measurement environment when performing the calibrations and they are skilled at handling the very toxic gases used for testing and have double checks in place to confirm that the test gas is still within acceptable specification. Looking at just the data on just a single tape sample is not adequate proof that the detection principle is reliable and reproducible; it is essential that the sensing technology can be backed by many years of data that takes into account batch to batch variations and confirms that every single Chemcassette® will detect toxic gas as specified, every time!

Chemcassette®



Q. What makes Chemcassette® technology unique?

In general all the chemical methods are specially formulated and proven to work in the real end user environment with demanding applications associated with changes in the environmental conditions and potential cross interference sources. We are not satisfied with making controlled laboratory environment only tests; all our Chemcassette® tapes must be proven to work in real industrial applications and be scalable for high volume production chemistry runs to satisfy our global customer base. Our Chemcassette® formulations are coated on a unique paper medium that is exclusively available to Honeywell Analytics. The software algorithms that process the gas detection methods on the MDA Scientific range of toxic gas analyzers are the product of many years of chemistry and software development and are only guaranteed to work when using Chemcassette® products. In summary the Chemcassette® medium and the instrumentation and software that control the detection principle are uniquely integrated; any unauthorized change in one of these factors would represent an unsafe gas sampling scenario as it would be both untested and unsupported by Honeywell Analytics.

Q. Is my original warranty still valid if I use other paper tape or consumable products on MDA Scientific Analyzers?

Honeywell Analytics can only support the warranty performance of both the MDA Scientific instrument and the Chemcassette® tapes so long as Honeywell Analytics approved parts and Chemcassette® tapes have been used and approved service interactions have been undertaken. Use of an unauthorized source of paper tape immediately voids the existing warranty on the MDA Scientific analyzer and Honeywell Analytics is not responsible or liable for any costs or damages caused by the use of inappropriate parts. Our customers' safety is imperative to Honeywell Analytics and we therefore recommend routine maintenance by approved service personnel to maintain the performance and warranty of their gas detection systems.

Q. What if an incident prevented the supply of Chemcassette® from the factory?

Honeywell Analytics support numerous industries that demand continuous supply of replacement Chemcassette® product; our customers could not maintain their own production processes without our guarantee of available supplies. To overcome any worst case scenario such as our factory being unable to manufacture new tapes (due to an accident affecting the building for example) we have a duplicate factory manufacturing Chemcassette® in Europe as well as the original manufacturing site in Illinois, USA. Both factories can supply in excess of our typical annual demand and operate to the same exacting standards, materials and ISO 9000 audited processes.



Interesting facts about Chemcassette® History

Accuracy & Reproducibility

Honeywell Analytics has manufactured Chemcassette® tape for the detection of Phosgene gas with a greater than 98% reproducibility for over 25 years. This equates to a length of Chemcassette® that could stretch to the Moon and back 16 times or wrap around the Earth's equator over 300 times!

History of Chemcassette®

A brief chronology of our developments with Chemcassette® demonstrates our long term commitment to supporting our customers and their life safety systems:

1972: Developed the TDI (7000) Chemcassette® instrument	1988: MDA Scientific acquired by Zellweger Analytics	1994: CM4 four channel continuous monitor launched
1977: Launch of Phosgene Chemcassette® tape	1992: Sulfur Analyzers developed for process analysis (9600L 9600P)	2000: Vertex 72 point continuous monitor launched
1981: Launch of Hydrides Chemcassette® tape	1992: Millionth tape produced and 1000 System 16 instruments shipped	2004: Extended 3 month lifetime Chemcassette® tapes launched
1983: 7100 and the LP extended lifetime Chemcassette®	1993: ISO 9000 approvals gained	2005: Honeywell acquire Zellweger Analytics to form a leading sensor supply company
1987: System 16 multi point sequential analyzer launched		

MDA Scientific has developed a sophisticated range of highly sensitive gas detection equipment, designed to perform in ways that define new gas detection performance levels. Providing total solutions to protect people, improve production efficiency and reduce costs.

The MDA Scientific range of toxic gas detection



Single Point Monitor

The SPM overcomes the difficulty of ensuring that basic units for toxic gas monitoring are accurate and free of interference from environmental conditions or other chemicals, by using our interference-free Chemcassette® detection technique. The SPM can also be used outdoors and has heating and cooling options to suit environmental conditions.



Vertex

Vertex provides a flexible, cost-effective monitoring solution that can adapt to changing needs. Using advanced Chemcassette® software and optics technologies, Vertex can monitor from 8 to 72 points of gas detection, up to 9 gas families and more than 40 gases.



Model IR-148

The Model IR-148 detects solvents and gases such as HCFCs, HFCs and PFCs that are otherwise difficult to monitor without the effect of cross-interfering gases.



Midas®

Midas® can measure virtually all the toxic and flammable gases found in manufacturing and storage applications. The range is in fact a universal transmitter design that differs significantly from the Lifeline II range which had separate passive, extractive and pyrolyzer variants with different footprints and performance characteristics.



CM4

CM4 provides monitoring of toxic gases at four locations, up to 300 feet away – detection of ppb levels of toxic gases at multiple points. Points are monitored continuously. Leaks are detected within seconds.

Find out more

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IN-USA

The IN-USA range of microprocessor controlled analyzers detect trace amounts of ozone (O₃) gas. Systems can be configured with relays and different signal output options for integration within life safety networks. High levels of signal sensitivity and resistance to false alarm are enabled by the use of advanced ultraviolet (UV) lamp detection systems.



Chemcassette®

The Chemcassette® detection system is the heart of an MDA toxic gas monitoring system. Chemcassettes® use a dry reagent medium to collect and analyze air to detect gas leaks. When the Chemcassette® is exposed to a target gas, it changes color in direct proportion to the concentration of gas present. MDA Scientific monitors read color intensity changes and determine the gas concentration by comparison to a known gas response pre-programmed into the instrument.

Honeywell