



## Press Release PR-89

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### Ion Science enhances Tiger Select for improved detection of Benzene and Total Aromatic Compounds

**Latest update designed to offer improved ease of use, simplicity and performance for users in oil refineries and petrochemical plants**

Further underlining its commitment to improving the safety of workers in hazardous environments, Ion Science ([www.ionscience.com](http://www.ionscience.com)) – leading manufacturer of gas detection instrumentation for global occupational health and environmental monitoring applications – has enhanced its Tiger Select handheld photoionisation detector (PID) for enhanced detection of benzene and total aromatic compounds (TACs).

The updated Tiger Select has been re-designed by Ion Science for ease of use, simplicity and maximum protection against potentially lethal volatile organic compounds (VOCs) such as benzene.

Ion Science has simplified the highly intuitive interface to make it more user-friendly and simpler to operate. The latest Tiger Select now features separate Basic and Advanced modes, allowing users to easily customise the instrument to suit their specific requirements.

In addition, the Tiger Select's new filter clamp is produced from a high strength material which comprises 30% glass filled polypropylene and is designed for improved resistance to harsh working environments and high humidity, plus ensures extended performance when used in conjunction with the new PTFE filter.

As part of the enhancements, Ion Science has introduced own brand benzene pre-filter tubes. Specially developed for use with Tiger Select, the highly cost-effective tubes offer enhanced performance by demonstrating better resistance to interference gases.

Utilising the high output Ion Science 10.0 eV lamp configuration, a reading for TACs is seen immediately on start-up in both Basic and Advanced modes.



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Where TACs are detected above the regulatory limit, a new Ion Science benzene pre-filter tube can be easily attached to Tiger Select to ensure rapid detection and selective measurement of benzene. A short-term exposure limit (STEL) can then be immediately initiated.

This three-step process provides instant TAC readings and minimises tube usage when benzene levels are low.

Benzene is a critical industrial chemical which is commonly found throughout the petrochemical industry. It is extremely hazardous and a recognised human carcinogen. To protect workers, legislation is in place across the world to ensure exposure is kept to a minimum, typically a time weighted average (TWA) of one part per million (ppm).

With such a low exposure limit, benzene concentration alone usually defines the toxicity of vapours in the petrochemical market as a whole. As a result, it is essential that sub ppm benzene concentrations can be measured rapidly in the presence of the hundreds of aromatic and aliphatic compounds encountered throughout the industry.

Ion Science's new benzene pre-filter tube oxidises aromatics and olefins, and adsorbs heavy components including alkanes. Lighter alkanes that pass through the tube do not respond on the 10.0eV lamp. Only benzene passes through the tube unoxidised and unadsorbed ready to be detected.

Throughout the measurement process, Tiger Select continues to display real-time data, ensuring the final reading represents the full value of actual benzene present\*. Benzene concentrations are displayed down to parts per billion (ppb) levels for more accuracy.

The health & safety feature can provide STEL readings after a 15-minute sampling period and calculate an eight-hour TWA for TACs. The instrument can be used in standard operational mode without the use of a benzene pre-filter tube to deliver active indications of VOCs, including benzene at concentrations as low as one ppb benzene equivalent.

The Tiger Select boasts Ion Science's market-leading MiniPID 2 sensor which incorporates both anti-contamination and Fence Electrode technology for extended operation in difficult working environments.

"Ion Science is continuously innovating in order to provide its customers with highly effective products to enhance the quality and safety of their operations," comments Duncan Johns, Ion Science's Managing Director. "As an industry-leading supplier of gas detection instrumentation to oil refineries and petrochemical plants, Ion Science utilises its technical capabilities and understanding of customer needs to strengthen worker safety.

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“The updated Tiger Select is an excellent example of this and offers advancements that are valuable to safety personnel for ensuring compliance and worker safety.”

**ENDS**

\*within the quoted specification

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