XplorIR Quantification Package

Simultaneously Identify and Quantify Hazardous Gases and Vapors

It's one thing to know if a hazardous gas or vapor is ***present*** at an incident, and another to know ***what*** the product is. But what if you could also know how much of the hazard exists in the atmosphere? That requires quantification, and the XplorIR® now provides this critical piece of information.

The XplorIR, based on Fourier transform infrared (FTIR) spectroscopy, can ***identify*** over 5,600 gases/vapors with extreme selectivity within seconds. With the new quantification package, the XplorIR can now ***quantify*** nearly 5,000 gases/vapors at parts-per-million (ppm) levels. This is done without any calibration required.

FTIR measurements are inherently quantitative, and the spectral response is linear with respect to product concentration. Using a reference library based on known chemical concentrations, the XplorIR can determine the ppm of a product captured within its 2-meter gas cell and report that concentration along with the product identity.

Once the concentration is known, it can easily be compared to the Immediately Dangerous to Life and Health (ILDH) level of the product within the XplorIR software. This allows you to make rapid tactical decisions about remediation and decon with just a few button clicks.

Going further, the XplorIR uses a proprietary, automated process which combines molecular functional groups with measured spectra to estimate quantitative data for nearly all library entries. This extends the quantitative capabilities from a few hundred compounds to several thousand. With its ability to identify and quantify up to 6 mixture components at one time, the XplorIR is a game-changer for chemical response scenarios such as clandestine labs and other situations involving complex gas and vapor environments.

Key Attributes

- Adaptively adjust to background atmospheric conditions
- Reliably detect products based on unique spectral features
- Identify up to 6 mixture components simultaneously
- Quantify multiple components at the part-per-million (ppm) level
- No user calibration required

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