

The most versatile and powerful gas-detection system on the market

Thermo Scientific  
MIRAN SapphIRe  
Portable Ambient Analyzer





## The most versatile gas detection system on the market today

Infrared spectroscopy provides the Thermo Scientific MIRAN SaphiRe Analyzers with the unique ability to specifically and accurately measure many gases with a single unit. The MIRAN's wavelength generator filter has a unique design that allows accurate and fast wavelength selection. This feature alone separates the MIRAN SaphiRe Analyzer from other gas analyzers

## Three models to fit your needs

The MIRAN SaphiRe XL: Offers optimal measurement capabilities for high-end users who need to measure a wide variety or mixed atmosphere of gases. Contains over 120 single gas applications with customization capability. Ideal for consultants, industrial hygienists, regulatory agencies, research scientists and emergency response professionals.

The MIRAN SaphiRe SL: Provides flexibility for users who perform similar measurements on a routine basis. Contains over 50 single gas applications with customization capability. Popular with indoor air quality specialists and anesthetic gas monitoring technicians

The MIRAN SaphiRe DL: Designed for users who regularly encounter a limited number of air monitoring applications. Features quick and easy operation for enforcement agencies and specified compound measurement projects.

## Key Features

- Easy to use
- Selective
- Sensitive for sub-ppm detection
- Versatile and upgradable
- Lightweight and portable

All models include user defined library space for 10 single gas and 10 multi-gas application, as well as real time compensations for temperature, humidity, reference and pressure.

## Training and Support

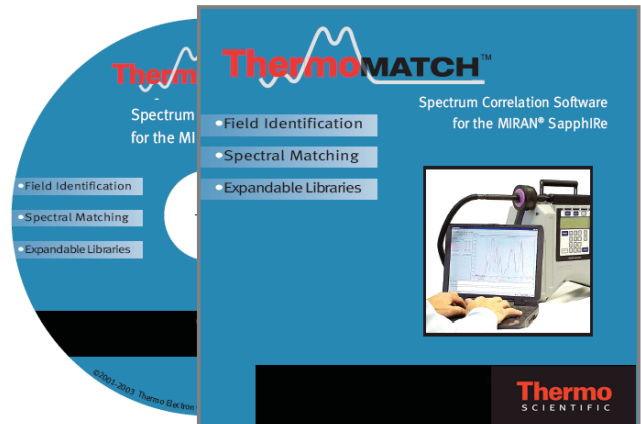
Need technical assistance? Our experienced team of laboratory and technical specialists are available to help you determine that right system for your application. And... we back it up with the support you need.

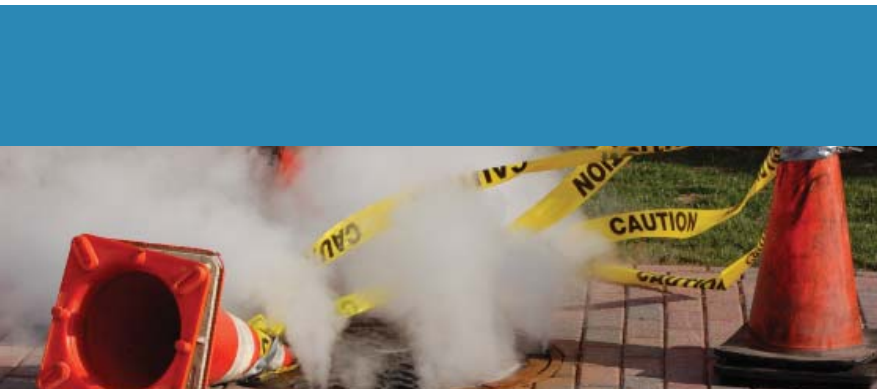


## Spectrum Correlation Software Option

Designed with the needs of the industrial hygienist and emergency response community in mind, ThermoMatch helps identify unknown airborne compounds. You can bring the analyzer to the incident resulting in quicker corrective action and less money expended on "blank" samples being analyzed at a lab.

The software includes 150 commonly toxic industrial compounds, and may be modified to a user library of hundreds more. This permits industrial users to include all site specific compounds, increasing the quality of the results. First responders can include SARA Tier 2 compounds for critical facilities to aid in containment actions.





## Four Easy Steps

1. A clean air zero sample is drawn into cell to establish baseline.
2. Contaminated air is drawn into the sample cell of the MIRAN SaphiRe.
3. An infrared scan of the air sample is performed and the absorption data is stored in the MIRAN SaphiRe.
4. Absorption data is down-loaded to a PC and ThermoMatch performs a correlation function against the selected library. Spectral similarities between the unknown scan and the library of spectra are compared with the most appropriate matches.

## Advantages

- Speed of analysis with on-the spot correlation of unknown compounds.
- Increased savings by eliminating costly and time consuming lab fees and analysis.
- Data logging saves spectra absorption files for further analysis and record keeping.

- Compound library of over 150 of the most commonly requested toxic industrial chemicals.
- User Library for customization of site specific compounds
- Non destructive infrared technology means you can send field analyzed sample to laboratory for further analysis.

## ThermoConnect Software

ThermoConnect is a graphical users interface that enables users of the MIRAN SaphiRe to transfer, display, analyze, and configure data from the instrument using a computer. ThermoConnect is Windows® based and facilitates the importing of data into other Windows® based applications making it easier to retrieve logged data.

Windows® is a registered trademark of Microsoft Corporation



## Applications

- **Industrial Hygiene**  
Real-time detection of vapors in job environments promotes safe work habits. MIRAN SaphiRe analyzers monitor at typical government-regulated levels.
- **Emergency Response Analysis**  
The MIRAN SaphiRe assists emergency response personnel by quantifying knowns and assisting in qualifying unknowns
- **Indoor Air Quality Studies**  
The MIRAN SaphiRe makes precise spot measurements for compounds such as CO<sub>2</sub>, CO, formaldehyde, or organic vapors.
- **Waste Anesthetic Gases**  
Service technicians can identify leaks on anesthetic delivery systems by using the MIRAN SaphiRe Ambient Air Analyzer as a part of Preventative Maintenance (PM) work.
- **Fume Hood / Tracer Gas Analysis**  
The MIRAN SaphiRe serves as an effective monitor for evaluating fume containment of laboratory hoods. Confirming proper operation of the ventilation systems with a fume hood is critical to assuring worker safety.
- **Leak Detection for Process Maintenance.**  
Using a leak detection probe you can set up the MIRAN SaphiRe to check for leaks around many types of process equipment, either in survey mode or in response to a specific compound.



# Thermo Scientific MIRAN SaphIRe Specifications

<b>Detector Type</b>	Single beam infrared spectrophotometer
<b>Pump Flow Rate</b>	14 liters per minute
<b>Analysis Time</b>	Following purge (typical); single wavelength, 20 seconds 5 wavelengths, 50 seconds spectral scan, 165 seconds
<b>Alarms</b>	User definable
<b>Readout</b>	8 lines 40 character LCD
<b>Response Time</b>	18 seconds to 90% of final reading
<b>Pathlength</b>	0.5m & 12.5m
<b>Sample Cell Volume</b>	2.24 liter
<b>Battery</b>	Internal, Rechargeable NiCd. 7.2V nominal; 5.7 Ah capacity Discharge time 4 hours; recharge time 4 to 6 hours
<b>Output</b>	0-1VDC, Parallel, Serial
<b>Dimensions</b>	Approximately 553 mm (21.8 in) wide x 365mm (14.4) high x 193mm (7.6in) deep
<b>Mass</b>	Approximately 10 kg (24lbs.)
<b>Intrinsic Safety Certifications</b>	User specified models are certified for ETL (Class 1, Div. 1. Groups B, C & D Temp Class T4) ETL-C (Class1, Div. 1 Groups B, C & D Temp. Class T4)
<b>Accessories</b>	
Leak Detection/ Sampling Wand	P/N CR014QC 15 3/4 " (40cm) long, and is composed of anodized aluminum tubing and chemically stable plastic
Transportation/ Carrying Case	PN CR013XM Wheeled case with telescoping handle doubles as a sturdy shipping case which will hold a spare battery, battery charger, cables, sample wand, carrying strap and filters
Field Performance Check Kit	P/N CR014LG

Thermo Scientific products represent a broad range of high-end analytical instruments, chemistry and consumable supplies, laboratory equipment, software and services that enable integrated laboratory workflow solutions. Thermo Scientific is the new name for a trusted brand – Thermo Electron – that the world's most renowned researchers, clinicians and scientists already count on to solve their analytical challenges. The brand is strengthened by the additions equipment, consumables and reagents acquired from Fisher Scientific.



© 2006 Thermo Fisher Scientific. All rights reserved.

Lit\_MIRANEID\_07/07