
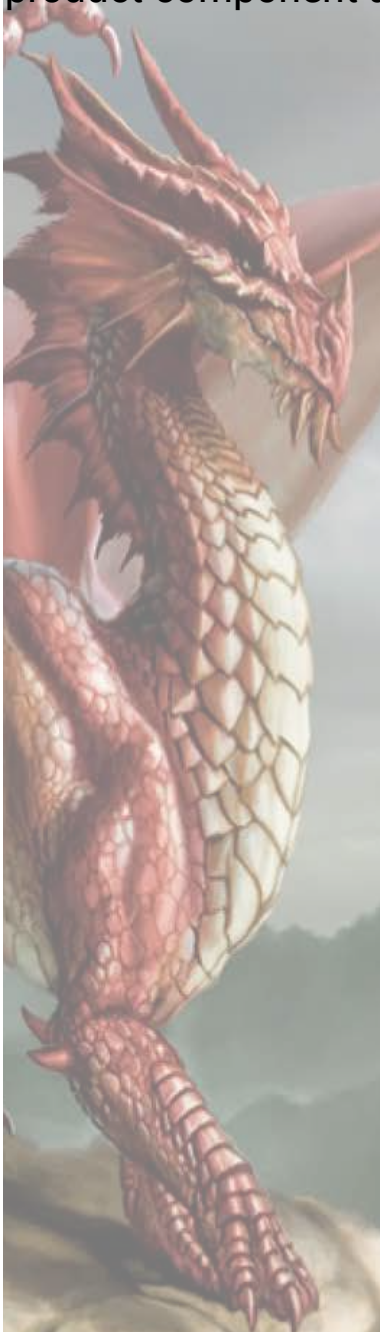


Flexible and easy-to-use trace gas analyzer

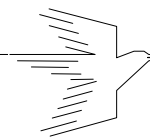
# GasDragon FTIR

Merlin MicroScience 

A fully integrated gas analysis system that alternates easily between percent-level product component analyses to sub-part-per-million level trace impurity analyses.



# An easy to use, low cost gas analysis system for percent level mixtures to sub-part-per-million level impurities



The Merlin MicroScience GasDragon FTIR spectrometer is a fully integrated gas analysis system designed for a wide range of applications. It can quickly and easily alternate between product component analysis at percent levels and trace analysis of impurities at sub-part-per-million levels.

FTIR spectroscopy is an extremely stable technique for gas analysis. Once the instrument is characterized, only performance checks are needed to validate quantitation. The Merlin MicroScience GasDragon FTIR spectrometer includes customized calibration recipes for each customer's specialized needs and pairs particularly well with the Merlin MicroScience Dilution System.

The optical bench is the robust and reliable Thermo Nicolet iS5, and the instrument panel is designed to safely handle reactive, corrosive, and other analytically challenging gases with as little risk to the operator as possible. Precision is less than 0.05%.<sup>1</sup> Typical detection limits for various matrix gases are listed in the table below.

Matrix Gas	Detectable Impurities (ppmv)				
	Carbon monoxide	Methane	Carbon dioxide	Water	Hydrogen fluoride
Air	0.3	0.3	0.3	2-5	na
Argon	0.3	0.3	0.3	2-5	na
Boron trifluoride			0.3	2-5	1
Carbon monoxide	na	0.3	0.3		na
Chlorine	0.3	0.3	0.3	2-5	1
Hydrogen bromide			0.3	2-5	
Hydrogen chloride	0.3	0.3	0.3		
Phosphine			0.3	2-5	na
Silane			0.3	2-5	na
Nitrogen	0.3	0.3	0.3	2-5	na

## Specifications:

Dimensions: 19" W x 14" H x 18" D  
Weight: 35 lbs (15.9 kg)  
Power Input: 120/240 VAC, 50/60 Hz  
Interface: PC USB 2.0  
Source Type: Mid-infrared Ever-Glo  
Spectral Range: 400-7500  $\text{cm}^{-1}$   
Resolution: 1  $\text{cm}^{-1}$   
Detector: Non-cryogenic DTGS

Window: KBr, ZnSe or  $\text{CaF}_2$   
Beam Splitter: KBr/Ge mid-infrared optimized  
Path Length: 1 cm and 10 cm (Short),  
6.4 m (Long)  
Output: Thermo Scientific™ OMNIC™  
Software with custom macros  
for continuous monitoring

<sup>1</sup> Precision based on a 7.2% germane in hydrogen mixture at a flow rate of 100 mls/minute

<sup>2</sup> Dimensions listed are based on short path cell model.

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