

The infrared spectral region is ideal for concentration monitoring of various chemicals such as low water, CO and CO₂. Ruggedness is of outmost importance in process applications. Most IR analyzer have a filter wheel to move from one wavelength to another or just scan, while the ChromaSpec IR is based on an IR detector array with a linear variable filter (LVF) and has no moving parts. The ChromaSpec IR provides a cost effective maintenance free solution to the monitoring of gasses or liquids that absorb in the infrared spectral region.

PRINCIPLE OF OPERATION:

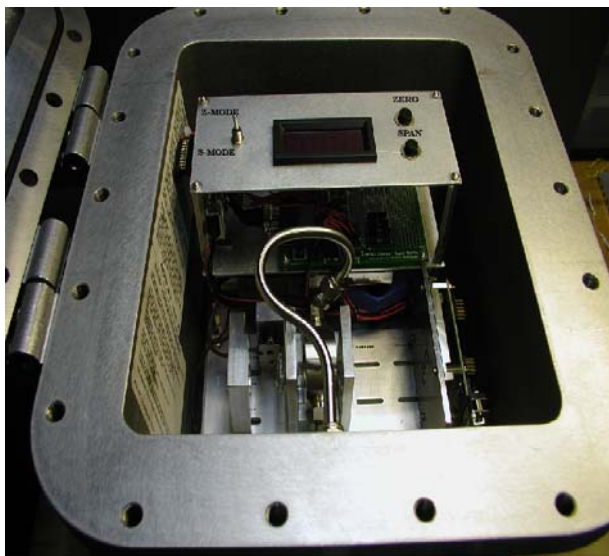
IR light is absorbed by the sample the absorbance signals are then correlated to concentration. The detector is very compact, the LVF functions as the dispersive optical component and is glued directly onto the metal cap above the detector. The LVF array detector is extremely easy to operate, it has no adjustable parts, requires no cooling, is insensitive to vibrations or shocks and delivers one complete spectrum per second. The light source is collimated and optimized for maximum intensity. The resolution for most LVF's is 1.5 % of the Entire wavelength range. The wavelengths covered by the LVF detector depends on applications and range from (for example) 1.4-2.4 μm, 2.6-2.8μm, 2.9-4.4 μm, 2.9-4.8 μm, 3.2-4.8 μm, and 5.5-11 μm.

THE ANALYZER

Two different enclosures are available, a general purpose and an explosion proof. User interface through two buttons and toggle switch, allowing for zero and span.

The **ChromaSpec_{IR}** components include:

- ◆ An IR light-source synchronized to operate with the detectors electronics.
- ◆ A sample cell, various path lengths are available depending on application, can be easily replaced
- ◆ IR detector 64 element array with a linear variable filter.
- ◆ A microprocessor for data acquisition, analysis and user interface.
- ◆ An LCD display. A 128 x 64 pixel graphic display. A high contrast, extended temperature range LED backlight LCD provides excellent viewing in direct light as well as indoors.
- ◆ A 4-20mA output signal



FEATURES

- Ideal for monitoring **PPM** level **WATER** in various solvents
- Fast and continuous quantitative measurements
- Contains no moving parts
- Extremely robust allowing for installations in process stream environments
- Replaces FTIR
- 4-20mA output
- For gas and liquids applications

INDUSTRIES

- Petrochemicals
- Chemicals
- Polymers
- Pharmaceuticals
- Food

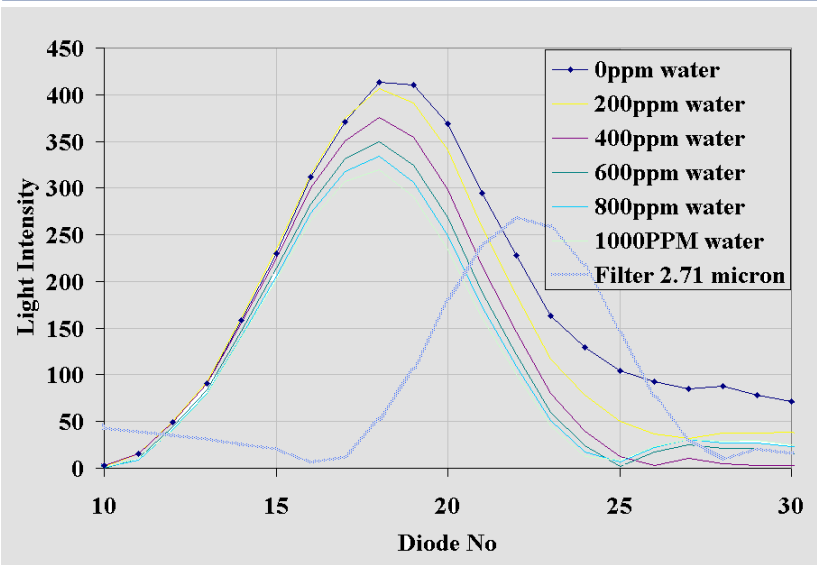
B-R Controls Pty Ltd

Unit 3, 95 Hunter Street
HORNSBY NSW 2077
Australia

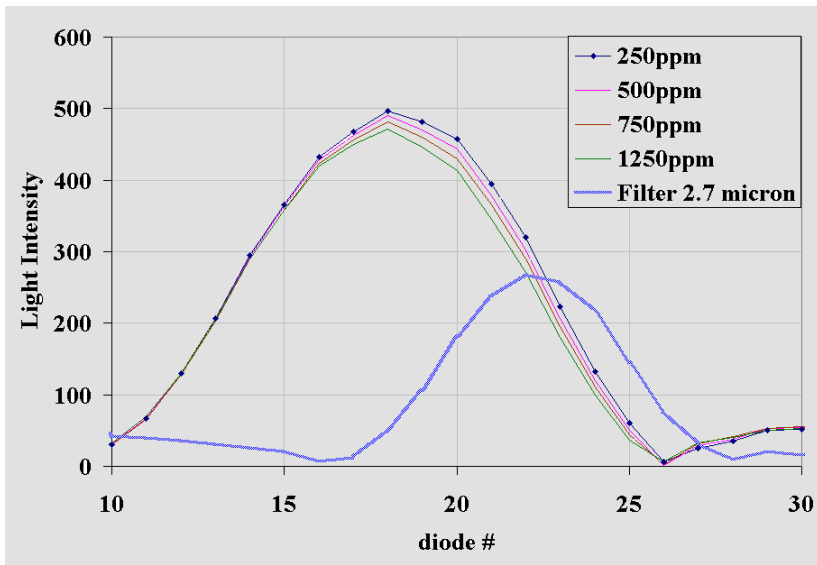
Telephone: (+61) (02) 9476 2133
Facsimile: (+61) (02) 9476 2688
E-mail: mail@brcontrols.com.au
Website: www.brcontrols.com.au



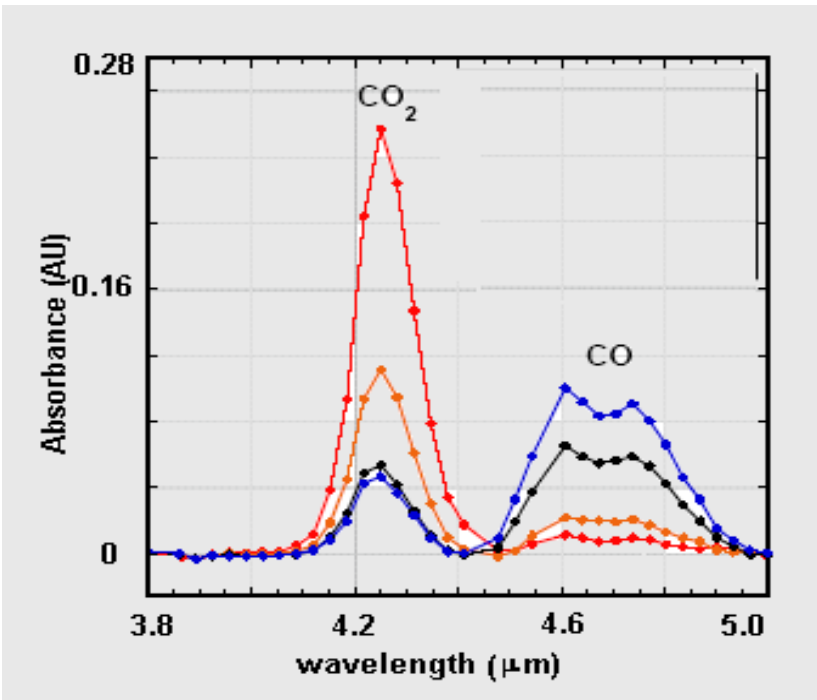
Applied Analytics, Inc.



IR spectra of PPM water in Acetonitrile, the 2.71 microns range is used to monitor the water levels in acetonitrile.



IR spectra of PPM water in acetone, the 2.71 microns range is used to monitor the water levels in acetone.



IR spectra of CO and CO₂, the CO₂ is monitored at the 4.25 microns and the CO at the 4.8 microns

Specifications	ChromaSpec IR
Detection:	IR array (2 to 10 Micron)
Flow cells	ATR and Transmission
Pressure:	Maximum 150psig (10 Bar)
Temperature:	100 C (212 F)
Measuring Range:	water (0-1000PPM) ;(0-10%) CO2 (0-2000PPM); (0-10%) CO (0-2000PPM); (0-10%) CH4 (0-5000PPM);(0-100%)
Drift:	0.1% of reading/ 24 hours
Noise:	±0.2% full scale
Power:	24 V DC 100 mA
Output:	4 – 20 mA 700 Ohm load galvanically isolated.
Connection:	2 1/4 " tube connections for flow in and out of the system
Response time	1 second per spectrum
Electrical:	General area classification (standard) Class 1 Div I Grps C, D (optional)

APPLICATIONS INCLUDE:

- HCl, HF
- Acetic acid
- Formaldehyde
- Esters
- Alcohol
- Acetone
- Aromatics
- VOC
- Water
- CO, CO2
- CH (hydrocarbons)
- Fluorocarbons; Freon
- SO2
- NO, N2O,
- NH3, urea
- NF3, SF6



2 Clock Tower Place
 Suite 535
 Maynard, MA 01754
 e-mail: sales@a-a-inc.com
 Tel: (888) 461-0080

Product Brief - CHROMASPEC IR
 © Copyright Applied Analytics Inc. , 2005
 The information in this publication is subject to change without notice

<http://www.a-a-inc.com>

