

**Fast and Accurate Detection of Sulfur,
Nitrogen and Halides**

MultiTek®


www.pacip.com



 **ANTEK**
by **PAC**

Sulfur, Nitrogen and Halides Analysis All in One Unique Instrument

- Long term stability and ease of use result in low operating costs and minimal maintenance
 - Fully automated operation for high analysis throughput and lab productivity
 - Environmental friendly technique eliminates hazardous operation
- Dedicated software provides superior analysis performance exceeding EN ISO 20846

FAST AND ACCURATE DETECTION OF SULFUR, NITROGEN AND HALIDES

Antek's MultiTek® is the only instrument on the market that combines testing for sulfur, nitrogen, and halides all in one. Compact, powerful, automated, and multi-configurable, it's the perfect solution to today's increasing demand worldwide for fast, accurate detection and analysis of unwanted chemicals, pollutants, contaminants, and corrosive elements. Because MultiTek® delivers precise results with high sensitivity and unmatched versatility, it's a valuable process optimization tool that will deliver fast ROI and a better bottom line.

MultiTek® detects these substances through a uniquely efficient process that includes combustion Ion Chromatography (IC), Ultraviolet Fluorescence (UVF), and Chemiluminescence technologies.

MultiTek® is superior to wet chemistry and XRF; works with solid, liquid, gas, and LPG samples; and provides lower detection levels than competitive systems. MultiTek® is the new enabling technology for continual product and process improvement and 'green' manufacturing goals.

APPLICATION RANGE

- Biodiesel
- Ethanol
- Plastics
- Polyolefins
- Groundwater
- Wastewater
- Processed Water
- Food & Beverage
- Animal Feed
- Refining
- Printing
- Electronics
- And Many More...

STANDARD METHODS

- ASTM D7359
- ASTM D5453
- ASTM D6667
- ASTM D6069
- ASTM D4629
- ASTM D7183
- ASTM D7184
- ASTM D7551
- ASTM D5176
- ASTM D5762
- EN 20846
- UOP 971, 936
- ENV 12260
- DIN 38409

SUPERIOR ANALYSIS WITH ANTEK'S MULTITEK®

- Stable, consistent measurements
- Higher sample throughput and analysis due to longer intervals between calibrations
- Halide measurement
- Wide dynamic range
- User-friendly, intuitive graphical user interface (GUI) for faster learning; powerful software toolkit
- Benchtop configuration with small footprint maximizes benchtop space
- 21 CFR part 11 edition computer bundle available, i.e. electronic records with full audit trail, electronic signatures, multi-access user levels, etc.
- Remote operation allows users to set methods and operate from off-site locations



REDUCE COSTS

- Remote Access Capability – The MultiTek® allows a trained user to access a remote location, thus eliminating the need to have a highly trained user at every lab location. Instead, a lab technician on-site is all that is needed.
- Prevent Product Giveaway – Low limits of sulfur and nitrogen detection (LOD) and high repeatability result in more efficient gasoline blending and optimized profits, because blenders use only the amount of product that they need.
- Prevent Costly Problems – Early warning of the presence of potential corrosion or catalyst poisoning halides, nitrogen, and sulfur allows pre-emptive, preventive action to protect product and assets.

INCREASE PRODUCTIVITY

MultiTek's wide dynamic range and automated combustion IC features mean that the user spends less time calibrating and more time running samples.

PROTECT ASSETS

- Corrosion protection – Protect electronics, refinery products, and others against the corrosive effects of halides (Chloride, Fluoride, and Bromide) and Sulfur Catalyst protection – Halides, Sulfur, and Nitrogen may act as catalyst poisons in the refining industry.
- Environmental protection – Protect people, animals, plant and aquatic life from the harmful effects of Halides, Sulfur, and Nitrogen in the environment.
- Employee protection – through reduced sample handling of Halides. MultiTek's combustion IC function automates sample preparation, reducing exposure potential to hazardous chemicals.

ENSURE COMPLIANCE

- Essential Product Compliance – MultiTek's LDL sensitivity and repeatability helps users meet product compliance such as Ultra Low Sulfur Diesel, aromatics, water, biofuels, electronics, lubricants, additives, and food.
- Ensure Product Quality – MultiTek® can be used to monitor processes and detect contaminations in products in food, plastics, specialty chemicals, animal feed and fertilizer.

MULTI-CONFIGURABLE

MultiTek® users can select any combination of modules required. This ensures that customers pay only for what they need, with the ability to upgrade and add capabilities in the future as additional analysis is needed.

AUTOMATED OPERATION

MultiTek's Automated Combustion IC operation provides two major benefits – it speeds sample processing for higher productivity, and reduces or minimizes exposure of the operator to substances being tested. Automated operation also increases repeatability of results by lessening the degree of operator involvement in the testing procedure.

MAXIMIZE BENCH SPACE

MultiTek® optimizes valuable benchtop space. It is the only instrument on the market that conforms to all of these methods in one configuration: (Halides Detection - ASTM D7359; Sulfur Detection - ASTM D5453, D6667, D7183, D7551 - EN 20846; Nitrogen Detection - ASTM D4629, D5176, D5762, D6069, D7184 - UOP 971, 936 - ENV 12260 - DIN 38409). Easily switch between the Halides detection mode and the Sulfur/Nitrogen detection mode all through the software interface – no manual reconfiguring of the instrument is necessary.



solidpartners provensolutions

U.S.A.

PAC, LP | 8824 Fallbrook Drive | Houston, Texas 77064
T: +1 800.444.TEST | O: +1 281.940.1803 | F: +1 281.580.0719
sales.usa@pacpl.com | service.usa@pacpl.com

FRANCE

BP 70285 | Verson | 14653 CARPIQUET Cedex
T: +33 231 264 300 | F: +33 321 266 293
sales.france@pacpl.com | service.france@pacpl.com

GERMANY

Badstrasse 3-5 | P.O.Box 1241 | D-97912 Lauda-Königshofen,
T: +49 9343 6400 | F: +49 9343 640 101
sales.germany@pacpl.com | service.germany@pacpl.com

SINGAPORE

61 Science Park Road | #03-09/10 The Galen
Singapore Science Park III | Singapore 117525
T: +65 6412 0890 | F: +65 6412 0899
sales.singapore@pacpl.com | service.singapore@pacpl.com

NETHERLANDS

P.O.Box 10.054 | 3004 AB Rotterdam
Innsbruckweg 35 | 3047 AG Rotterdam
T: +31 10 462 4811 | F: +31 10 462 6330
sales.netherlands@pacpl.com | service.netherlands@pacpl.com

RUSSIA

Shabolovka Street | 34, Bldg. 2 | 115419 Moscow
T: +7 495 617 10 86 | F: +7 495 913 97 65
sales.russia@pacpl.com | service.russia@pacpl.com

CHINA

Room 1003, Sunjoy Mansion | No. 6 RiTan Rd.
Chao Yang District | Beijing 100020
T: +86 10 650 72236 | F: +86 10 650 72454
sales.china@pacpl.com | service.china@pacpl.com

INDIA

1036 Regus | Trade Center, Level 1
Bandra (E) - 400 051 | Mumbai
T: +91 22 40 700 447 / 700 | F: +91 22 40 700 800
sales.india@pacpl.com | service.india@pacpl.com

MIDDLE EAST

A1 Quds Street, A1 Tawar road | LIU#H13 Dubai Airport Freezone
Near Dubai Airport (terminal 2) | P.O.Box #54781 | Dubai, UAE
T: +971 04 2947 995 | F: +971 04 2395 465
sales.middleeast@pacpl.com | service.middleeast@pacpl.com

SOUTH KOREA

#621 World Vision Building | 24-2, Youido-dong
Seoul 150-010
T: +82 2785 3900 | F: +82 2785 3977
sales.southkorea@pacpl.com | service.southkorea@pacpl.com

THAILAND

26th Floor, M. Thai Tower | All Seasons Place
87 Wireless Road | Lumpini, Phatumwan | Bangkok 10330
T: +66 2627 9410 | F: +662627 9401
sales.thailand@pacpl.com | service.thailand@pacpl.com

PAC Authorized Representatives are also located in most countries worldwide. For more information visit www.pacpl.com

ANTEK

Leading Elemental Analysis and Chromatography

Since 1967, Antek has been a global leader in lab and on-line elemental analysis instrumentation and custom chromatography instruments that detect sulfur and nitrogen/sulfur compounds. The Antek line also includes process analyzers for monitoring total nitrogen and sulfur in liquids, gases and LPGs and determination of nitrogen, sulfur, total hydrocarbon, and aromatics for the quality assurance for CO₂

SPECIFICATIONS

Detection Method		
MultiTek® N Nitrogen Analyzer	Pyro-chemiluminescence	
MultiTek® S Sulfur Analyzer	Pyro-fluorescence	
MultiTek® IC Halides Analyzer	Combustion IC	
Analytical Range	Range	LOD ¹
MultiTek® N Nitrogen Analyzer	low ppb to wt%	15 ppb
MultiTek® NS Nitrogen Analyzer	low ppb to wt%	N: 30ppb/ S: 100 ppb
MultiTek® S Sulfur Analyzer	low ppb to wt%	100 ppb
MultiTek® LLS Sulfur Analyzer	low ppb to sub wt%	30 ppb
MultiTek® IC Halides Analyzer	low ppb to sub wt%	200 ppb
Typical Sample Size ²		
Gas	5 to15 ml	
LPG	5 to 15 µl	
Liquid	1 to 40 µl	
Solid	up to 500 mg	
Typical Analysis Time		
Gases / Liquids	2-5 minutes (dependent upon sample type / method)	
Solids	2 – 15 minutes (dependent upon sample type / weight)	
Halides	15 – 30 minutes	
Temperatures		
Combustion zone	ambient to 1100°C in 1°C increments – 1050°C default	
Gases		
Dry oxygen	400 – 650 ml/min, 99.75%, 3 bar (40 psig), < 5 ppm moisture	
Dry carrier (argon or helium)	50 – 200 ml/min, 99.99%, 3 bar (40 psig), < 5 ppm moisture	
Water	18 mega ohm, Type 1 H ₂ O	
Miscellaneous Specifications		
Power	115 vac 50/60 Hz 1500 W	
	230 vac 50/60 Hz 1500 W	
Dimensions	52x54x61cm, 21x21x24inch (hwxwd)	
Weight	37 kg (80 lb)	

¹LOD was determined with water and/or solvents at optimal conditions. LOD will vary based on the matrix and instrumental conditions. Refer to the appropriate MultiTek Application Note for LOD for a specific material of interest. ²Analytical range/sample size may be a function of sample matrix & methods of introduction.

Continuing research and development may result in specification or appearance changes at any time.