

**TAKE CONTROL
KNOW WHAT'S
IN YOUR WATER**



For nearly a decade,
our vision has remained
the same: To improve
access to water quality
monitoring through the
development of practical
and affordable solutions.

OUR INNOVATIVE TECHNOLOGIES
solve challenges with using light for
water quality analysis (spectrophotometry)
in the most simple & effective manner.

OUR PRODUCT SOLUTIONS
provide rapid and accurate detection
of contaminants such as organics and
nitrates while maintaining ease of use
& cost effectiveness.

OUR PEOPLE
make all the difference, we truly care
about our clients.

Discover the world of

REALTECH
INC.
SHINING LIGHT ON WATER QUALITY

OUR CLIENTS

are the top priority at Real Tech. With clients in 40 countries around the world including large and small municipal water and wastewater treatment plants, major water industry leaders, Fortune 500 companies as well as government agencies, our focus is always on providing our clients with solutions for their unique needs.

OUR BENEFIT

can be seen across many applications including: optimization of various water treatment processes improving efficiency and creating significant cost savings; ensuring increasingly stringent water quality guidelines and regulations are met; improving drinking water security; minimizing environmental pollution of waterways; and ensuring effective water reuse.

OUR FUTURE

is very bright, as we continue to grow and create new solutions to meet the evolving needs of the water industry today and tomorrow, furthering our vision to make water quality analysis more attainable for all.

40
countries
around
the world
& counting



“THE SOLUTIONS OFFERED BY REAL TECH COMBINE OUTSTANDING PERFORMANCE AND ROCK-SOLID RELIABILITY FOR EVEN OUR MOST DEMANDING APPLICATIONS. REAL TECH DELIVERS.”

DR. PETER GALLANT, VICE-PRESIDENT | ENDETEC SENSOR GROUP | VEOLIA WATER SOLUTIONS & TECHNOLOGIES

Our recognitions continue to grow as we grow.

RBC
CANADIAN
WOMEN
ENTREPRENEUR
AWARDS

technology | Deloitte.
green 15™



Improving global water quality with innovative monitoring solutions.



P PORTABLE SERIES

Our 'P' series provides the most comprehensive and competitive UV254 (SAC or UVT) organic testing portable field meter solutions in the world. The 'P' series product line utilizes our unique technology to offer extreme accuracy and ease of use. A very fast response time makes it the ideal solution for grab sample use anywhere, anytime.

M ONLINE SERIES

The Real UV254 'M' series of analyzers provide continuous real time UV254 (SAC or UVT) analysis. The 'M' series by-pass style format is ideal for most drinking water, ultrapure, and pressurized applications. With our innovative technology our 'M' series product line has various solutions to meet any water condition.

M PROBE SERIES

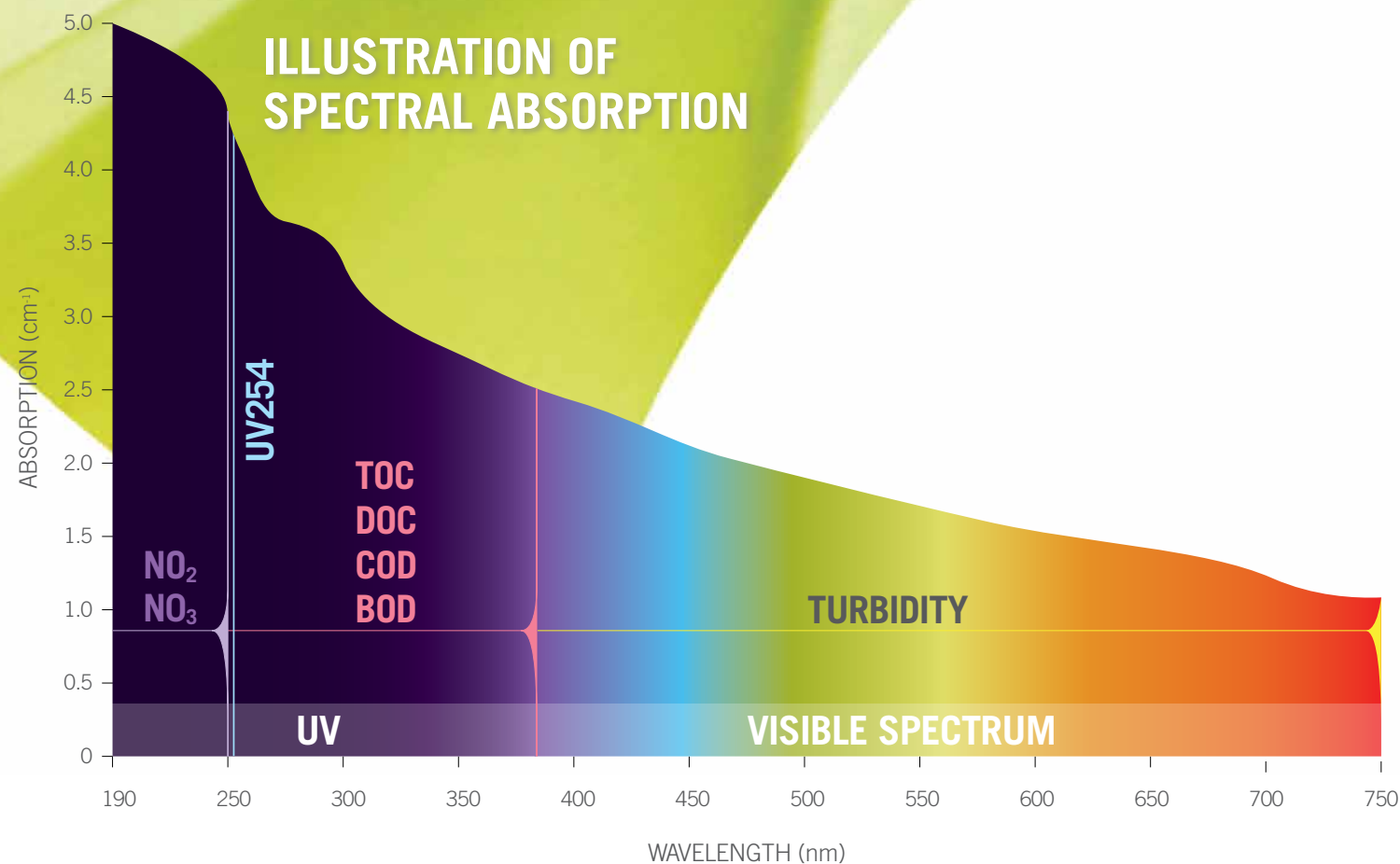
The M1000 analyzer series measures UV254 (SAC or UVT) continuously in real time. This product line series has been designed specifically to meet the needs of wastewater open channel or non-pressurized applications. The M1000 series features easy calibration and low maintenance while its robust design and price point make it the solution of choice.

PL GL SPECTRUM SERIES

Our Spectrum series provides real time analysis across the entire spectrum of UV visible light, which allows for the rapid detection of many common water quality parameters such as TOC, DOC, COD, BOD, UV254, Turbidity, Colour, BTX, NO₂, NO₃, and various Spectral Fingerprint Alarms. The Spectrum series offers a wide array of customization, features and options to meet any client's application needs.

Spectral Absorption

Many important water quality parameters can be detected by using light within the UV and/or visible light range. By measuring light absorbed by a water sample at particular wavelengths, the concentration of a contaminant can be determined.



“OUR RESEARCH IN THE FIELD REQUIRES INSTRUMENTS THAT ARE ACCURATE, ROBUST, AND EASY TO OPERATE AND MAINTAIN. REAL TECH EQUIPMENT MEETS OUR NEEDS.”

RON HOFMANN, PROFESSOR AND NSERC ASSOCIATE INDUSTRIAL RESEARCH CHAIR IN DRINKING WATER | UNIVERSITY OF TORONTO

Typical water quality parameters that can be detected with spectral analysis include: Natural organic matter (NOM); UV254, also known as Spectral Absorbance Coefficient (SAC), expressed in either units of UV absorbance (UVA) or UV transmittance (UVT); Total Organic Carbon (TOC); Dissolved Organic Carbon (DOC); Chemical Oxygen Demand (COD); Biochemical Oxygen Demand (BOD); Color (hazen); Assimilable Organic Carbon (AOC); Nitrates (NO₃); Nitrites (NO₂); Benzene, Toluene and Xylene (BTX); and Turbidity (NTU) as well as many other specific contaminants which have absorption properties within the UV and/or visible light range.

What does spectral analysis mean to you?

This usually depends on your specific application and water quality monitoring goals. Our team at Real Tech is more than happy to work with each client to help ensure they have the best analyzer for their unique needs.

Many of our drinking water clients with simple water quality conditions looking for an indication of organic matter throughout their plant can utilize any of our P or M series instruments to provide them with rapid and simple detection of organic loading at key points in the treatment process.

Both the P and M series instruments provide measurements of only UV absorbance (UVA) at the UV 254nm wavelength of light, which has a bias towards the more aromatic or reactive organics in the water. This is particularly beneficial for drinking water plants that utilize chlorine disinfection since reactive organics are the most problematic and serve as the best indicator of a plant's potential to form disinfection by-products (DBPs) such as THMs and HAAs.

By setting plant goals based on UVA instead of relying upon periodic TOC sampling or using expensive, complex, continuous TOC analyzers, these clients are able to monitor for fluctuations in their organic loads throughout the plant. This allows them incredible optimization benefits and ensures their ability to decrease their DBP formation potential.

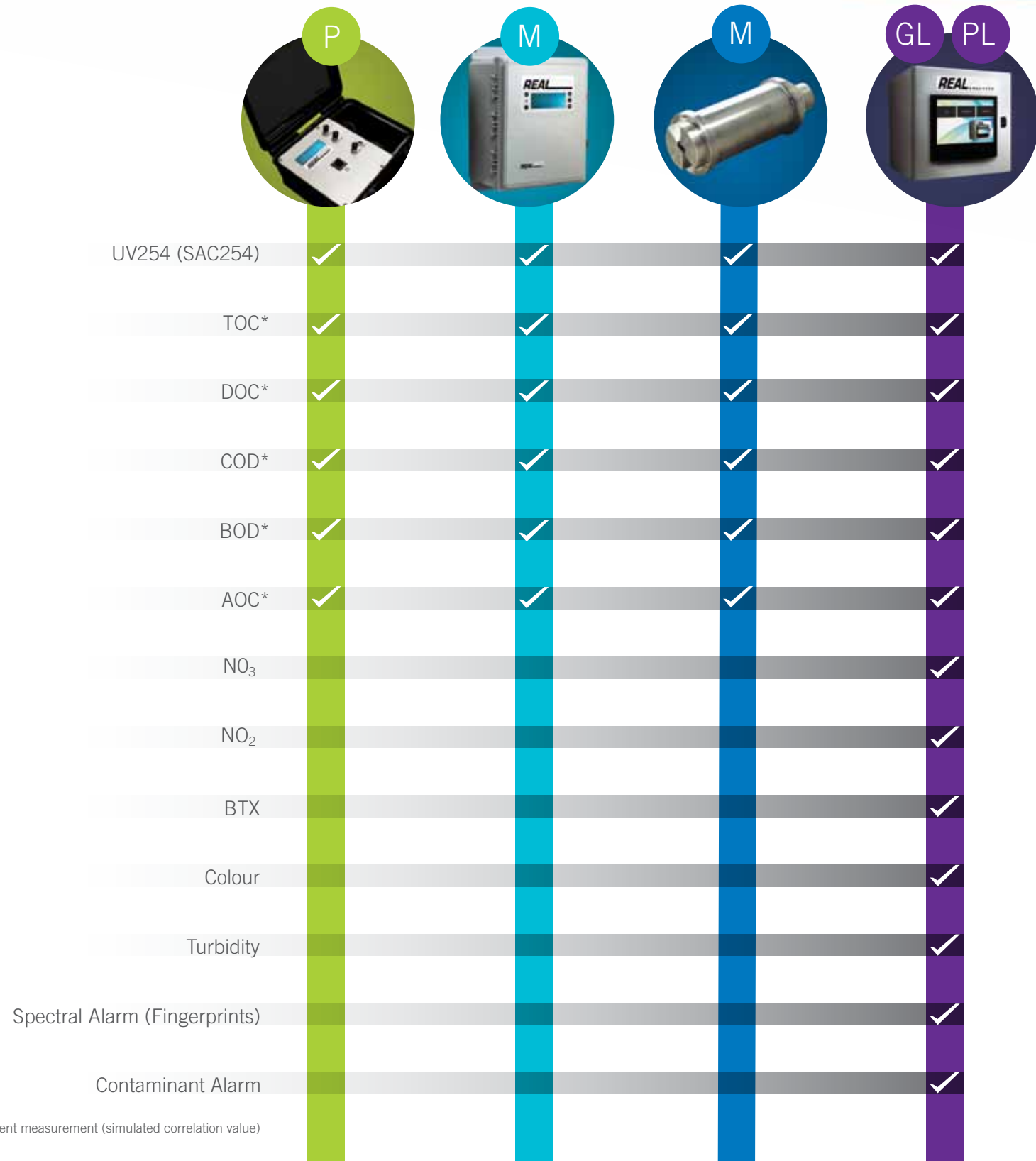
However, some of these same clients are more familiar with TOC values and prefer to have their Real Tech analyzers output an equivalent TOC value. Some studies have shown general correlations of UV254 to TOC. For instance, 0.03 – 0.035 UVA usually indicates a TOC reading of approximately 2 mg/L.* To gain the best correlation possible when using UV absorption as a surrogate to other organic water quality parameters, custom site specific calibrations provide the strongest relationship and give clients the highest confidence in their analyzer's outputted equivalent values, such as TOC in mg/L.

For some clients, single wavelength analysis is sufficient to establish a strong custom correlation using the P and M series instruments. However, clients with more complex water conditions or clients seeking multiple parameter analysis will benefit from Real Tech's GL series with configurable multiple wavelength analysis and increased performance. Furthermore, Real Tech's PL series performs full spectrum scanning which produces significantly more detailed analysis capabilities for the most complex water quality conditions.

Real Tech's products have been designed with the unique ability to utilize our in-house expertise remotely through our Smart-Sense software packages. With Smart-Sense customized software, our products are able to learn a client's specific water quality conditions. We then use this information to customize the software to achieve the strongest relationship (r² value) with minimal involvement from the client.

*Edzwald, J.& Kamiski, G. (2008). Journal NEWWA. A Practical Method for Water Plants to Select Coagulant Dosing.

A summary of some of the most common water quality parameters which Real Tech's various products can detect are illustrated in the diagram below.



Product Selection Guide

SINGLE PARAMETER ANALYSIS

P	UV254/UVA (Abs/cm)	UVT (%)	TOC (mg/L)	DOC (mg/L)	COD (mg/L)	BOD (mg/L)	Color (hazen)
P100	0-13	0-100	0-500	0-330	0-1200	0-640	0-400
P200	0-1.3	5-100	0-100	0-65	0-240	0-130	0-80

M	UV254/UVA (Abs/cm)	UVT (%)	TOC (mg/L)	DOC (mg/L)	COD (mg/L)	BOD (mg/L)	Color (hazen)
M2000	0-13	0-100	0-1000	0-660	0-2400	0-1275	0-800
M3000	0-1	10-100	0-100	0-65	0-240	0-130	0-80
M4000	0-0.05	89-100	0-4	0-3	0-10	0-5	0-3

M	UV254/UVA (Abs/cm)	UVT (%)	TOC (mg/L)	DOC (mg/L)	COD (mg/L)	BOD (mg/L)	Color (hazen)
M1000	0-13	0-100	0-1000	0-660	0-2400	0-1275	0-800

MULTIPLE PARAMETER ANALYSIS

GL	UV254/UVA (Abs/cm)	TOC (mg/L)	DOC (mg/L)	COD (mg/L)	BOD (mg/L)	Color (hazen)	NO ₃ (mg/L)	NO ₂ (mg/L)	Turbidity (NTU)	TSS (mg/L)	Spectral Alarm
GL2000	0-13	0-1000	0-660	0-2400	0-1275	0-1600	0-320	0-240	0-3000	0-1600	No
GL3000	0-1.3	0-100	0-65	0-240	0-130	0-160	0-30	0-25	0-300	0-160	No
GL4000	0-0.05	0-4	0-3	0-10	0-5	0-6	0-1	0-1	0-12	0-6	No

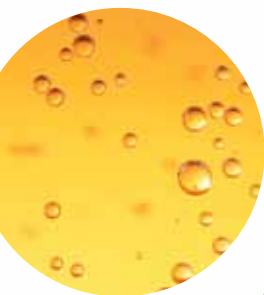
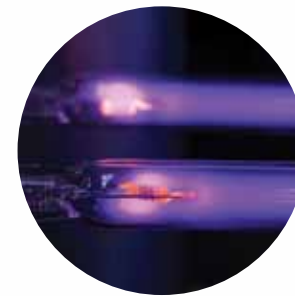
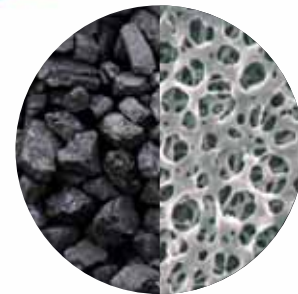
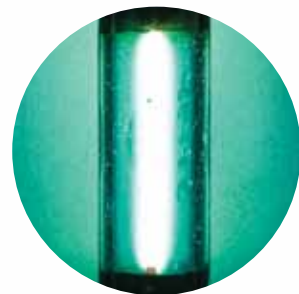
PL	UV254/UVA (Abs/cm)	TOC (mg/L)	DOC (mg/L)	COD (mg/L)	BOD (mg/L)	Color (hazen)	NO ₃ (mg/L)	NO ₂ (mg/L)	Turbidity (NTU)	TSS (mg/L)	Spectral Alarm
PL2000	0-13	0-1000	0-660	0-2400	0-1275	0-1600	0-320	0-240	0-3000	0-1600	Yes
PL3000	0-1.3	0-100	0-65	0-240	0-130	0-160	0-30	0-25	0-300	0-160	Yes
PL4000	0-0.05	0-4	0-3	0-10	0-5	0-6	0-1	0-1	0-12	0-6	Yes

* Equivalent measurement (simulated correlation value)

From wastewater to high purity water. We have a monitoring solution that's right for you.

WASTEWATER (HIGH ORGANIC LADEN WATER)

ULTRAPURE (HIGH PURITY WATER)



WASTEWATER

Effluent discharge limits for wastewater have become increasingly stringent to protect the environment and those using our most valuable resource. Traditional laboratory testing of effluent water quality is necessary for compliance reporting, but often impractical for gauging treatment performance due to length of testing and associated laboratory costs. Real Tech's line of single and multiple parameter instrumentation provides real time equivalent measurements for parameters such as BOD and COD to ensure limits are not exceeded between compliance testing.

INDUSTRIAL WATER

Manufacturing industries across the globe consume millions of gallons of water daily. The quantity and purity of water required will often be dictated by the processes and products produced at each respective plant. From influent to effluent, monitoring water and/or product is imperative to ensure quality control for health and safety concerns as well as operational control for efficient processes and cost savings. Real Tech's comprehensive product line spans from traditional testing to more customized solutions, such as tracking the consistency of a product with spectral fingerprint analysis.

DRINKING WATER

Surface and ground water represent the primary resources for municipal water supply. To ensure public safety, source water must be treated to remove contaminants and pathogens that exist naturally in the environment. The quality of source water has a direct impact on the effectiveness of the treatment process. Therefore, monitoring water quality will guide process adjustments and assist in evaluating plant efficiency to ensure optimization and treatment effectiveness. Real Tech offers instrumentation to measure some of the most common parameters, such as UVT, TOC and NO₃, accurately and reliably while keeping capital and maintenance costs extremely low.

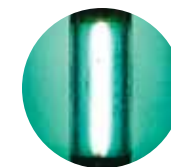
Wastewater

Water is the most precious resource on the planet. Cutting edge wastewater treatment plants are now looking towards becoming water recovery centres, purifying the water to be reused rather than just discharged back into our lakes and rivers.

With this shift in treatment strategy and better efforts to preserve our source waters and the environment, effluent discharge limits are becoming increasingly stringent to minimize pollution.

Government agencies have established guidelines and regulations to ensure toxic substances are not entering the waterways at levels that could cause detrimental effects. Several treatment technologies are employed by both municipal and industrial users to meet compliance. Technologies are often accompanied by instrumentation designed specifically for wastewater conditions.

Traditional laboratory testing of effluent water quality is necessary for compliance reporting, but often impractical for gauging treatment performance due to length of testing and associated laboratory costs. Real Tech's line of single and multiple parameter analyzers provides equivalent measurements for parameters such as BOD and COD to ensure limits are not exceeded between compliance testing. For process monitoring, Real Tech's M Series probe measures UVT in real time.



WASTEWATER UV DISINFECTION

PROBLEM

Chemical free UV disinfection is becoming widely accepted for wastewater disinfection. For proper disinfection, UVT is critical to ensure optimal log inactivation of pathogens to protect the upstream drinking water facility or surrounding populations.

SOLUTION

Real Tech's M Series probe is designed specifically for wastewater UVT monitoring. Featuring low maintenance and easy calibration, the system is designed with our clients in mind. Using Real Tech's innovative technology, the probe measures UVT accurately and reliably over time without drift.

RESULTS

- Low maintenance accurate UVT monitoring
- Low UVT alarm for off specification performance
- Improved effluent quality and public safety

RECOMMENDED PRODUCTS P M



MUNICIPAL POLLUTION CONTROL

PROBLEM

Municipal wastewater effluent is subject to strict regulations to protect the environment and the surrounding population that relies on the water source. BOD is a commonly regulated parameter, however the test method is time consuming and expensive.

SOLUTION

Real Tech offers both spectrum and UV254 analyzers to monitor BOD equivalents in real time while compensating for common interferences such as total suspended solids (TSS). With options for pump and automatic cleaning, open channel wastewater BOD monitoring is attainable.

RESULTS

- Real time BOD equivalent monitoring
- Process adjustments to improve effluent quality
- Limit potential for non-compliance

RECOMMENDED PRODUCTS M M GL PL



INDUSTRIAL WASTEWATER EFFLUENT

PROBLEM

Industrial processes produce a large volume of wastewater to be treated. Wastewater can be disposed directly to sewer or treated onsite for discharge to the environment. Effluent limits vary by industry with common parameters being COD and BOD, both of which are difficult to measure in real time.

SOLUTION

Real Tech offers both spectrum and instruments to analyzers to monitor COD and BOD equivalents in real time. Advanced technologies with spectral analysis allow Real Tech to characterize complex wastewater sources, common across the various industrial markets. Addition of a pump system an automatic chemical cleaning system ensures optimal performance and accuracy.

RESULTS

- Real time BOD and COD measurements
- Identification of product in wastewater with Spectral Fingerprint
- Limit potential for non-compliance with municipality
- Avoid violations and fines for environmental discharge

RECOMMENDED PRODUCTS M M GL PL

Industrial Water



Water is a key element for many industrial processes from heating and cooling to cleaning and sanitation.

Manufacturing industries across the globe consume millions of gallons of water a day. With the increasing costs of water and concerns over water shortages and meeting compliance, industrial processors are implementing efficiency measures.

From influent to effluent, monitoring water and/or product is imperative to ensure quality control for health and safety concerns as well as operational control for efficient processes and cost savings.

Real Tech's comprehensive product line spans from correlating to traditional parameters such as TOC and BOD to advanced spectral analysis to characterize the consistency of a product or complex water source.



PROCESS WATER

PROBLEM

Large quantities of water are required for industrial processing which may require in-house treatment. With the large dependency on water, effective and efficient water use is imperative to ensure quality control for health and safety concerns as well as cost savings.

SOLUTION

Real Tech's innovative UV254 and spectrum analyzers assist in process adjustments and contaminant detection for improved efficiency. Real time monitoring of common parameters such as UVT, TOC, COD and BOD assist in water treatment while spectral fingerprint analysis can identify product carryover in the process water.

RESULTS

- Source water monitoring for treatment process adjustments
- UVT monitoring for UV disinfection
- Identification of product loss
- Increased health and safety
- Improved operational control and cost savings

RECOMMENDED PRODUCTS



COOLING WATER

PROBLEM

Water used for the cooling process can contain impurities from accidental process leaks through the heat exchanger or as a result of poor makeup water quality. Organic matter can have negative effects on the cooling systems resulting in loss of efficiency and additional costs.

SOLUTION

Real Tech's UV254 and spectrum analyzers provide immediate detection within 10-15 seconds of organic contamination in the cooling systems or make up water. With options for automatic chemical cleaning and bypass style instrumentation, the monitor is easily integrated into the cooling system.

RESULTS

- Real time monitoring of the makeup water for elevated organics levels
- Detection of leaks at the heat exchanger
- Decreased biological growth in the cooling tower from minimal organic matter
- Sufficient chlorine residual
- Improved efficiency due to limited corrosion

RECOMMENDED PRODUCTS



“ A SOLID PIECE OF EQUIPMENT WITH RELIABLE PERFORMANCE ”

STEPHEN (TAI) TANG, RESEARCH SCIENTIST



BOILER FEEDWATER

PROBLEM

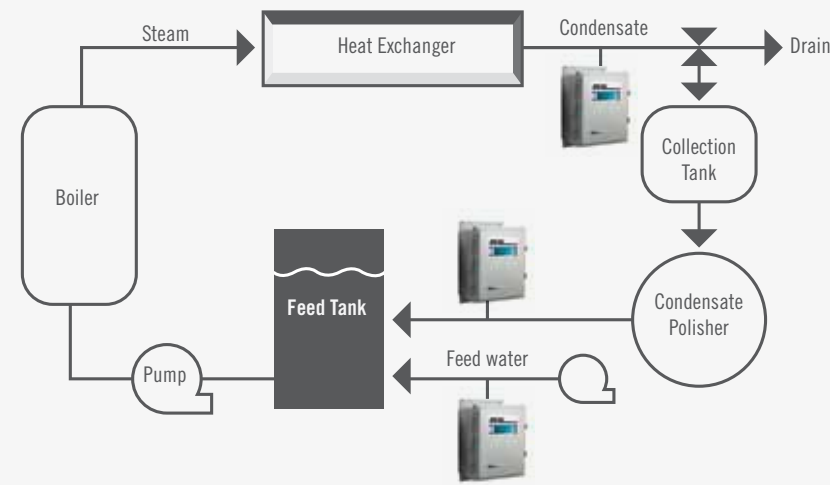
Water supplied to a boiler system, often termed “feedwater” can contain impurities that compromise the integrity of the system. Specifically, organic matter can cause corrosion leading to failure of the system and loss of process efficiency.

SOLUTION

Real Tech’s UV254 and spectrum analyzers accurately measure organic matter in water providing equivalent values for TOC, a common parameter for feedwater monitoring. The reagent less method of measurement combined with innovative design and accessories allows for the most practical and cost effective detection of organic contamination in boiler systems.

RESULTS

- Real time monitoring of feedwater for elevated organic levels
- Detection of leaks at the heat exchanger into the boiler system
- Improved system efficiency
- Reduced system downtime due to corrosion



RECOMMENDED PRODUCTS M GL PL



HIGH PURITY PROCESS WATER

PROBLEM

Ultrapure water production is common in many industries for washing and as a product ingredient. Source water entering the facility contains impurities that must be removed before compromising the manufacturing process.

SOLUTION

Real Tech’s innovative designs allow for highly sensitive measurements of trace contaminants in process water. The method is reagent-less and provides immediate response when impurities are approaching the maximum concentration level.

RESULTS

- Improved ultrapure water production through process monitoring
- Reduced risk of compromised product
- Increased potential for reuse through monitoring

RECOMMENDED PRODUCTS M GL PL



REUSE

PROBLEM

Perspectives about water use have changed significantly due to shortages, rising costs and environmental compliance. Efficiency measures for reuse are becoming more widely accepted, however wastewater streams often contain impurities and must be monitored if reuse practices are implemented.

SOLUTION

Real Tech offers practical and operator friendly instruments to help the facility make decisions on whether a wastewater stream is suitable for reuse. Configurable software design allows for customized options to measure common parameters such as TOC, COD or BOD as well as spectral fingerprint analysis for the detection of product leaks or carryover in wastewater.

RESULTS

- Recovery of condensate, RO permeate or vapor condensate low in organic matter
- Improved process efficiency through additional water quality monitoring
- Cost savings through lower municipal water requirements

RECOMMENDED PRODUCTS M GL PL

“ WE INSTALLED A REAL TECH M3000 DUAL-STREAM UNIT FOR OUR CUSTOMER TWO YEARS AGO. TO DATE IT HAS SAVED THEM THOUSANDS OF DOLLARS AND THE SERVICE REQUIREMENTS HAVE BEEN MINIMAL. CHANGED THE LAMP OUT AND PERFORMED A ONETIME CLEANING OF THE SAMPLE CHAMBER. LESS THAN 30 MINUTES TOTAL TIME. GREAT CUSTOMER SUPPORT AND CONTINUED FOLLOW-UP INTEREST ON REAL TECH’S PART TO MAKE SURE ALL OUR NEEDS ARE BEING MET”

DANIEL SMITH, MANAGER | MONTANAS ELECTRIC

Drinking Water



Government agencies across the globe establish guidelines and enforce regulations to improve water quality and protect public health.

In the drinking water industry, ongoing concerns relate to the presence of microorganisms, such as Giardia cysts and Cryptosporidium oocysts, and disinfection by-products (DBPs), such as Trihalomethanes (THMs) and Haloacetic Acids (HAA5) in municipal drinking water. Pathogens and DBPs can cause disease and sickness in humans if ingested beyond tolerable limits. Therefore: to ensure public safety, pathogens must be removed and formation of by-products limited.

Surface and ground water represent the primary resource for municipal water supply. Each water source has its own distinct matrix of sedimentary and biological particulates, a direct reflection of the surrounding basin and land practices. Since each water source is unique, various treatment technologies can be employed to meet drinking water standards and guidelines.

Monitoring water quality is often the first requirement to understand whether a technology is appropriate for a specific application. The characteristics and concentration of contaminants in water have a direct impact on the effectiveness of the treatment process. A small investment in instrumentation to monitor water quality will guide process adjustments, provide optimization and treatment effectiveness, assist in evaluating plant efficiency and ensure public safety.



SOURCE WATER MONITORING

PROBLEM

Source water, both surface and ground, fluctuate as a result of environmental conditions and human impact. With various different influences the quality of water can change unpredictably within minutes, negatively impacting the treatment process.

SOLUTION

Understanding the value of source water monitoring, Real Tech offers practical solutions for organics and/or nitrate monitoring. Real time UV nitrate and UV254 organic instruments are reagent less and robust. With options for turbidity compensation and automatic chemical cleaning our clients can be ensured optimal performance with minimal maintenance.

RESULTS

- Immediate response for adjustments to downstream treatment processes
- Time and cost savings

RECOMMENDED PRODUCTS



COAGULATION OPTIMIZATION

PROBLEM

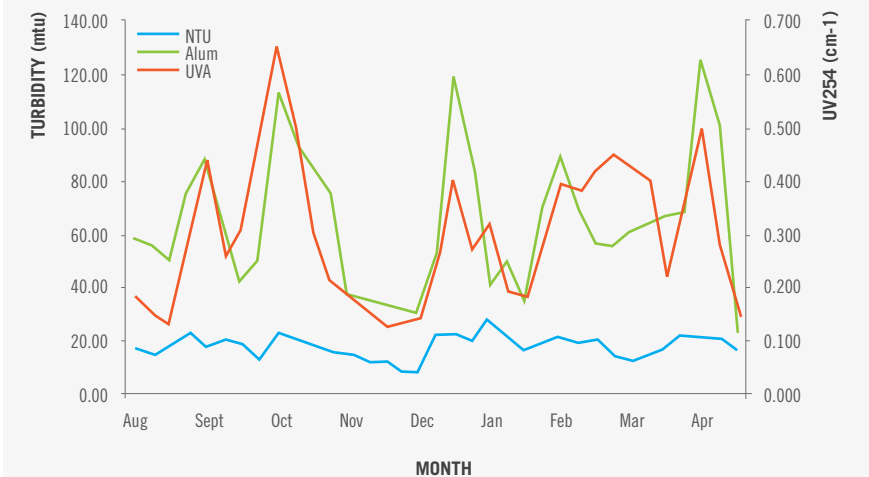
Improper coagulant dosing can lead to added treatment costs for a drinking water facility. Overdosing causes an excess in sludge production that must be removed while under dosing leaves particles and organic matter present in the water that must be removed before chlorination.

SOLUTION

Real Tech's line of UV254 instruments monitor the most problematic aromatic organics that increase coagulant demand. Clients can select from portable meters for jar testing and continuous bypass analyzers for real time dosing adjustments. Options for automatic cleaning and dual feed mode allow for increased performance and accuracy.

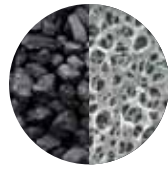
RESULTS

- Savings on chemical coagulant usage
- Decreased sludge production and removal
- Limit potential for DBP formation
- Improved effluent quality
- Low capital cost equals strong ROI



RECOMMENDED PRODUCTS





CONTAMINANT REMOVAL

PROBLEM

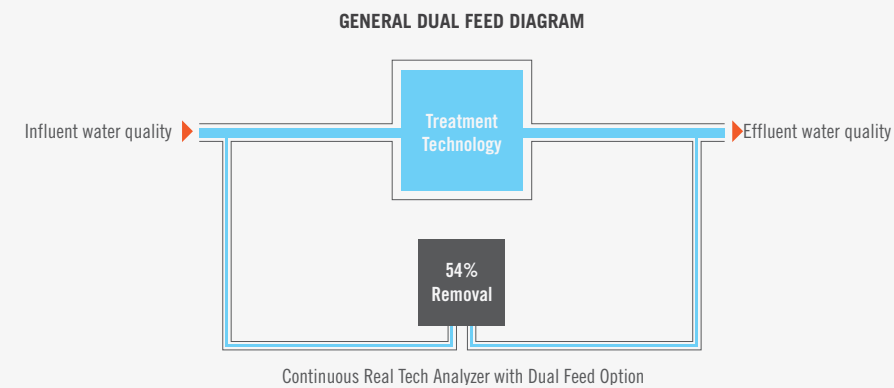
Interference from organic matter can compromise the integrity of removal technologies such as membrane filtration, ion exchange and granular activated carbon (GAC) resulting in fouling, improper removal and poor effluent quality.

SOLUTION

Real Tech's UV254 instruments are the most reliable and affordable options for monitoring the efficiency of these various removal technologies. The addition of the dual feed option to any bypass analyzer will allow the facility to anticipate interference to the treatment technology while monitoring effluent quality.

RESULTS

- Less fouling of membranes and ion exchange
- Improved removal of target inorganic and organic species
- Higher effluent quality
- Decreased backwash frequency
- Longer carbon lifetime improving cost of ownership



RECOMMENDED PRODUCTS P M GL



UV DISINFECTION PERFORMANCE

PROBLEM

Pathogens in drinking water such as Cryptosporidium are best removed by UV disinfection. Organic and suspended matter in water will absorb and scatter UV light interfering with pathogen inactivation. To determine the UV dose required for optimal performance, measuring ultraviolet transmittance (UVT) is critical.

SOLUTION

Real Tech offers the most comprehensive UVT product line on the market to suit every client's needs. Advanced technologies allow Real Tech to offer various form factors, ranges, and accompanying options for every application and budget.

RESULTS

- Accurate UVT data collection for design and sizing
- Low UVT alarm for off specification performance
- UV dose calculation with UVT for maintaining in compliance
- Dose pacing with real time UVT analysis for energy savings
- Portable UVT sampling for service troubleshooting
- Portable UVT sampling for custom calibration of online analyzers
- Improved effluent quality and public safety

RECOMMENDED PRODUCTS P M



DBP FORMATION POTENTIAL

PROBLEM

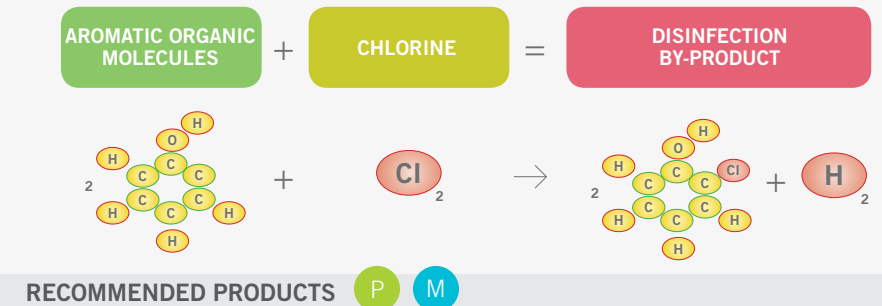
Disinfection by-products (DBPs) can be harmful to humans if ingested beyond tolerable limits. If not removed through treatment, organic matter will react with chlorine to form DBPs, most commonly trihalomethanes (THMs) and Haloacetic acids (HAA5).

SOLUTION

Real Tech's UV254 instruments have a bias towards aromatic (reactive) organics which are most problematic for DBP formation potential and are the best indicator of precursor levels throughout the treatment process. With options to suit every plant's budget and monitoring strategy, UV254 is the best surrogate to monitor removal of precursors before chlorine addition.

RESULTS

- Improved effluent quality
- Less chlorine required for distribution residual
- Compliance with MCL for THMs and HAA5s
- Improved public safety



DISTRIBUTION SYSTEM SECURITY

PROBLEM

Accidental or intentional contamination of a distribution system can occur without warning resulting in detrimental effects to public health. Traditional instruments used in the treatment facility are often not sufficient to detect trace amounts of contaminants in water within the distribution system.

SOLUTION

Real Tech's UV254 Security analyzer allows for a high level of sensitivity to detect down to 10 ppb of various toxic industrial chemicals and biological contaminants in drinking water. Evaluated by the U.S. EPA's National Homeland Security Research Center (NHSRC) Technology Testing and Evaluation Program (TTEP), Real Tech's security analyzer features a rapid 10-15 second response time for immediate notification.

RESULTS

- Reagentless organics monitoring with minimal downtime
- Enhanced public security
- Low capital cost for multiple node designs

RECOMMENDED PRODUCTS M GL PL

“ WE APPRECIATE THE EXCELLENT SERVICE RECEIVED BY THE REAL TECH TEAM. THE TECHNOLOGY OFFERED OFFERS RELIABLE OPERATION AS WELL AS MINIMAL MAINTENANCE. OVERALL, EXCELLENT TECHNOLOGY, EXCELLENT PRICE AND EXCELLENT SERVICE.”

JEAN-LUC PARADIS, MUNICIPAL DIRECTOR | POLYCHEM

Product Specification Sheets



- P Portable Series
- M Online Series
- M Probe Series
- GL Spectrum Series
- PL Spectrum Series

P Series

For over 9 years, our Real UV254 'P' series portable meters have been redefining expectations for organic analysis in the field. With our patented Split-Sense technology, we offer hands down the world's most advanced, accurate and affordable portable UV254 organic testing meter.

Designed to cope with the harsh conditions encountered in the field, the 'P' series meters are very rugged yet have an accuracy that surpasses most laboratory instrumentation.



- PORTABLE FIELD METER
- MEASURES UV254 (SAC OR UVT)
- ACCURATE, STABLE, RELIABLE, PRECISE
- FAST RESPONSE
- EASE OF USE
- RUGGED
- LOW COST
- CALIBRATION MEMORY (NO DI WATER NEEDED)
- INNOVATIVE TECHNOLOGY
- LONG LIFE LAMP

Our meters can also provide testing in both units of UV transmittance (UVT) and UV absorbance (UVA), and any of the meters can be equipped with our optional battery pack feature, allowing the 'P' series meters to truly go anywhere, anytime. Our patented Split-Sense technology also allows for the unique ability to remember the meter's calibration, eliminating the need to calibrate (zero) the meter to a known pure (DI) water source before taking a measurement. This improves ease of use in the field for performing rapid grab sample testing of various water sources.

	P100 SERIES	P200
RANGE	0 - 13 UVA	0 - 1.3 UVA 5 - 100 %UVT
ACCURACY	+- 0.5 % FS	
RESOLUTION	0.001 UVA	0.001 UVA 0.1 %UVT
UNITS	cm ⁻¹	
PATH LENGTH	10mm, 2mm, 1mm	10mm
SAMPLING TIME	n/a	
CALIBRATION	Calibration memory prevents the need to re-zero to DI water.	
CLEANING	n/a	
SELF DIAGNOSTICS	Notification of system failure	
OPERATOR INTERFACE	Easy to use. No complex configuration required	
DISPLAY	32 character backlit LCD	
ALARMS		
HUMIDITY CONTROL	n/a	
OUTPUTS		
WAVELENGTH	253.7nm	
LIGHT SOURCE	Low-pressure mercury UV lamp / UV LED	
LAMP LIFE	2 years	
DIMENSIONS	8.7"L x 7.5"W x 3.9"H (254 cu in)	
ENCLOSURE	Rugged, compact, watertight and dustproof	
FLOW RATE		
PRESSURE RATING	n/a	
FLUID CONNECTIONS		
ELECTRICAL	12VDC 1A wall adapter (accepts 90-250VAC 50/60Hz), 12VDC car adapter	
STORAGE TEMP	-20 to 60°C (-4 to 140°F)	
OPERATING TEMP	0 to 45°C (32 to 113°F)	
WEIGHT	4 lbs	
WARRANTY	2 years limited warranty	
TECHNOLOGY	Split-Sense	
OPTIONS	Battery power-pack	

M Series

Our 'M' series of analyzers lead the way in online real time UV254 (UVT) organic analysis. Real Tech's focus on developing simple yet effective technologies has resulted in Real Tech truly being able to provide the world's most comprehensive product offerings for UV254 analysis.



- MEASURES UV254 (SAC OR UVT)
- UV EQUIVALENT TOC, DOC, COD, BOD
- CONTINUOUS REAL-TIME ANALYSIS
- BY-PASS STYLE ANALYZER
- ACCURATE, STABLE, RELIABLE, PRECISE
- FAST RESPONSE
- ROBUST, SMART DESIGN
- OPERATOR FRIENDLY, EASY TO USE
- CONFIGURABLE
- INNOVATIVE TECHNOLOGY
- AUTOMATIC CALIBRATION/ZEROING
- AUTOMATIC CLEANING OPTION
- REAGENT FREE
- LONG LIFE LAMP

Our 'M' series product solutions are designed with our clients in mind. The 'M' series solutions are practical, accurate, and reliable and feature incredible ease of use from installation to operation, all with low maintenance.

With various optional accessory products and features to choose from, our 'M' series of products can meet any application and budget. Our accessories include Dual Feed option which allows two water sample lines to be connected to one analyzer, our Real Clean Automatic Chemical Cleaning System option, and our various water quality parameter software correlation packages which allow an 'M' series monitor to output a correlated TOC, DOC, COD or BOD value if desired. With Real Tech's incredible client service support that accompanies all the analyzers we always go that extra mile to ensure our clients have the best solution configured for their unique needs.

	M2000 SERIES	M3000 SERIES	M4000 SERIES*
RANGE	0 - 13 UVA	0 - 1 UVA 10 - 100 %UVT	0 - 0.05 UVA 89 - 100 %UVT
ACCURACY		+/- 0.5 % FS	
RESOLUTION	0.001 UVA	0.001 UVA 0.1 %UVT	0.00001 UVA 0.001% UVT
UNITS		cm ⁻¹	
PATH LENGTH	10mm, 4mm, 2mm, 1mm	10mm	250mm
SAMPLING TIME		10 seconds	
CALIBRATION	In-situ zeroing to any sample with known UVT. No further calibration required		
CLEANING	In-situ cleaning makes cleaning quick and easy. Automatic chemical cleaning is optional.		
SELF DIAGNOSTICS	Detection and diagnosis of internal system fault		
OPERATOR INTERFACE	Five push buttons to control a comprehensive hierarchical menu system		
DISPLAY	4 line x 20 character backlit LCD with LED alarm indicator		
ALARMS	Dry contact terminals allow operator configurable alarms for: high and low UVT/UVA setpoints, low lamp output, leak detected, system fault, etc.		
HUMIDITY CONTROL	Humidity sensor with large regeneratable desiccant system		
OUTPUTS	Self-powered 4-20mA, RS232 serial for PC		
WAVELENGTH	253.7nm		
LIGHT SOURCE	Low-pressure mercury UV lamp / UV LED		
LAMP LIFE	2 years		
DIMENSIONS	16"H x 14"W x 8"D		17"H x 15"W x 7"D
ENCLOSURE	NEMA 4X, wall mountable		
FLOW RATE	300 - 1000 mL/min		
PRESSURE RATING	20 PSI		100 PSI
FLUID CONNECTIONS	1/4" tube push-in fittings		
ELECTRICAL	24VDC 40W power adapter (accepts 90-250VAC 50/60Hz)		
STORAGE TEMP	-20 to 60°C (-4 to 140°F)		
OPERATING TEMP	0 to 45°C (32 to 113°F)		
WEIGHT	22 lbs		24 lbs
WARRANTY	2 years limited warranty		
TECHNOLOGY	Split-Sense Pro	Ortho-Beam	Split-Sense Pro
OPTIONS	<ul style="list-style-type: none"> • Dual Feed • Real Clean Systems • Pump Systems • Turbidity Compensation 		

* Includes Real UV254 Security monitor

M Series

The new M1000 series expands on Real Tech's successful Real UV254 'M' series of products to include probe style analyzers. The M1000 probes are specifically designed to provide increased accuracy and reliability in open channel or non-pressurized wastewater applications while maintaining affordability and ease of use.



- CONTINUOUS REAL-TIME ANALYSIS
- MEASURES UV254 (SAC OR UVT)
- SUBMERSIBLE PROBE STYLE ANALYZER (IN-SITU)
- UV EQUIVALENT TOC, DOC, COD, BOD
- ACCURATE, STABLE, RELIABLE, PRECISE
- FAST RESPONSE
- ROBUST, SMART DESIGN
- OPERATOR FRIENDLY, EASY TO USE
- INNOVATIVE TECHNOLOGY
- AUTOMATIC CALIBRATION/ZEROING
- LOW MAINTENANCE AND OPERATING COST
- AUTOMATIC CLEANING OPTION
- LONG LIFE LAMP

The M1000 probes are beneficial for many heavy organic laden monitoring applications such as monitoring UVT for wastewater UV disinfection. Real Tech also offers two new optional product accessories that can accompany any M1000 probe analyzer. The new 'Real Controller', specifically designed for the M1000 series, is a wall mounted operator interface allowing for convenient display and control of multiple M1000 probes. The new 'Real Air Clean' automatic pressurized air cleaning system makes an excellent complement to further improve performance and ease of maintenance for any M1000 series probe.

Real Tech's unique technologies simply and effectively overcome the inherent challenges of UV254 real time organic monitoring, thereby offering superior performance at a fraction of the cost of alternative organic monitoring solutions.

	M1000 SERIES	M1500
RANGE	0 – 13 UVA	10 – 100% UVT
ACCURACY	± 0.5 % FS	
UNITS	cm ⁻¹	
PATH LENGTH	1mm, 2mm, 4mm, 10mm	10mm
SAMPLING TIME	10 seconds	
CALIBRATION	Exclusive technologies allow for continuous automatic calibration during operation	
CLEANING	Optional Real Air Clean automatic pressurized air cleaning system	
SELF DIAGNOSTICS	Continuous detection of leaks, lamp output, humidity, temperature and electrical fault	
OPERATOR INTERFACE	<ul style="list-style-type: none"> • Push button driven comprehensive hierarchical menu system (with optional Real Controller) • RS232/USB interface to PC based Windows application 	
DISPLAY	4 line x 20 character backlit LCD (with optional Real Controller)	
ALARMS	Onscreen alarms	
HUMIDITY CONTROL	Humidity sensor with desiccant pack	
OUTPUTS	<ul style="list-style-type: none"> • Self-powered 4-20 mA output (with optional Real Controller) • RS232/USB interface for datalogging via PC 	
WAVELENGTH	253.7 nm	
LIGHT SOURCE	Low pressure mercury UV lamp / UV LED	
LAMP LIFE	2 years	
DIMENSIONS	4" diameter x 10" length	
ENCLOSURE	Stainless steel with max rated depth of 36' (optional Real Controller is rated NEMA 4)	
ELECTRICAL	24 VDC 120W power adapter included (power adapter accepts 90-250 VAC 50/60 Hz)	
STORAGE TEMP	-20 to 60°C (-4 to 140°F)	
OPERATING TEMP	0 to 45°C (32 to 113°F)	
WEIGHT	8 lbs	
WARRANTY	2 year limited warranty	
TECHNOLOGY	Split-Sense Pro	Ortho-Beam
OPTIONS	<ul style="list-style-type: none"> • Turbidity Compensation • Real Air Clean Systems • Real Controller • Mounting Kit 	<ul style="list-style-type: none"> • Real Air Clean Systems • Real Controller • Mounting Kit

PL Series

GL

Real Tech's continuous online spectroscopy analyzer series provides highly accurate, easy to use and affordable real time process monitoring across the whole spectrum of UV and/or visible light, which allows for the rapid detection of many common and emerging contaminants.

Our spectrum analyzers can provide multi-component measurement capabilities. They are able to extract and isolate concentration information about one or more chemical components of concern in water even when an unknown mixture of other chemical components is also present in the water.



SPECTROPHOTOMETER (OPTICAL SPECTRAL SENSOR), **ULTRAVIOLET (UV) / VISIBLE SPECTROMETER**

MULTIPLE PARAMETER ANALYSIS

ONLINE (IN-LINE) REAL-TIME (CONTINUOUS)

ACCURATE, STABLE, RELIABLE, PRECISE

FAST RESPONSE

ROBUST, SMART DESIGN

CONFIGURABLE, CUSTOMIZABLE

SIMPLE OPERATION, EASY TO USE

GLOBAL CALIBRATION AND CUSTOM CALIBRATION OPTIONS

EASY INSTALLATION AND MINIMAL MAINTENANCE

EXCEPTIONAL TECHNOLOGY, INNOVATIVE

AUTOMATIC CLEANING OPTIONS

AUTOMATIC CALIBRATION/ZEROING

REAGENT FREE

Whether your application is for wastewater or high purity (ultrapure) water, our spectrum analyzer product series can be configured and customized for your specific water type.

Water quality parameters which can be detected with any of our Spectrum series analyzers include TOC, DOC, COD, BOD, BTX, Colour, Turbidity, NO₂, NO₃, among others. Spectrum series analyzers can be used for more complex water systems where the additional information provided by the full absorption spectra (PL series) or the addition of select wavelengths (GL series) allows for improved correlations and measurement capabilities. Real Tech offers in-house custom software correlations to meet the needs of each client's unique site specific requirements.

REAL SPECTRUM ANALYZER SERIES

UNITS	cm ⁻¹
SAMPLING TIME	1 minute
FLOW RATE	300 - 800 mL / min
CALIBRATION	Exclusive technologies allow for continuous automatic calibration during operation
CLEANING	Automatic cleaning optional
SELF DIAGNOSTICS	Continuous detection of leaks, lamp output, humidity, temperature and electrical fault
DISPLAY	Backlit LCD with LED alarm indicator (optional 10" colour LCD 800x600 with Touch Panel PC)
OPERATOR INTERFACE	Heirarchical menu system with push button control (optional touch screen graphical interface with Touch Panel PC)
ALARMS	Onscreen alarms and dry contacts to signal alarm condition
HUMIDITY CONTROL	Humidity sensor with large plug-in regeneratable desiccant system
OUTPUTS	• Most common communication protocols available ie. MODBUS • Datalogging via RS232, RS485, 4-20mA (Ethernet and USB drive with Touch Panel PC option)
DIMENSIONS	16" h x 20" w x 8" d
ENCLOSURE	IP66, NEMA 4, wall mountable
FLUID CONNECTIONS	1/4" tube push-in fittings in/out
ELECTRICAL	24 VDC 120W power adapter included (power adapter accepts 90-250 VAC 50/60 Hz)
STORAGE TEMP	-20 to 60°C (-4 to 140°F)
OPERATING TEMP	0 to 45°C (32 to 113°F)
WARRANTY	2 year limited warranty
OPTIONS	• Dual Feed • Real Clean System • Pump Systems • Touch Panel PC

PLATINUM SERIES	PL2000 SERIES	PL3000	PL4000
ACCURACY	± 0.5 % FS		
RANGE	0 - 13.0 A	0 - 1.3 A	0 - 0.05 A
PATHLENGTH	1mm, 2mm, 4mm	10 mm	250 mm
WAVELENGTH RESOLUTION	~ 1 nm		
WAVELENGTH	200-380 nm (200 - 750 nm with Platinum Visible Plus option)		
LIGHT SOURCE	Deuterium Lamp (Deuterium + Tungsten with Platinum Visible Plus option)		
LAMP LIFE	4000 hrs		

GOLD SERIES	GL2000 SERIES	GL3000	GL4000
ACCURACY	± 2 % FS		
RANGE	0 - 13.0 A	0 - 1.3 A	0 - 0.05 A
PATH LENGTH	1mm, 2mm, 4mm	10 mm	250 mm
WAVELENGTH RESOLUTION	configurable up to 40 wavelengths over full range		
WAVELENGTH	200-750 nm		
LIGHT SOURCE	Xenon Flash Lamp		
LAMP LIFE	2 - 5 years (dependant on application)		

Optional Products & Accessories

Real Tech has designed a variety of options and accessories with our clients' best interests in mind. Optimal configuration ensures the highest level of performance for each respective application and water source.

INNOVATIVE ACCESSORIES

Real Tech offers a variety of additional accessories to further configure the instrumentation package for optimal performance in each water source.

BATTERY PACK P

Battery pack for P series instruments for remote sampling allowing for sampling to truly be performed anywhere, anytime.

DUAL FEED M GL PL

Available for continuous bypass analyzers, this option allows for multiple channel sampling with one analyzer, and includes three-way automatic valve and software options.

PUMP SYSTEMS M GL PL

In open channel or non-pressurized systems, the pump systems can accompany any bypass style analyzer and are self-priming. Pump System options can come complete with a Real Clean System in one system.

REAL CONTROLLER M

Wall mounted operator interface to accompany any M Series submersible probe. Allows for multiple M Series probe connections.

MOUNTING KIT M

Ideal to accompany any new M Series submersible probe installation.

TOUCH PANEL PC GL PL

Expands the control and configuration capabilities of any spectrum series product.

PLATINUM VISIBLE PLUS PL

Expands detection ability of any Platinum series analyzer to include visible light range.

TURBIDITY COMPENSATION M

Allows for turbidity compensation to be added to any M series product.

SEAWATER UPGRADE M GL PL

Allows use of any bypass style analyzer to accommodate seawater conditions.

SOFTWARE PACKAGES

Real Tech offers various software packages that allow our clients to customize and configure their instrument beyond the standard output. Whether our clients are looking for assistance in programming the standard software or looking to output the equivalent values of common parameters such as TOC, BOD or NO₃, utilizing custom site specific correlations, we have the tools to make the task easy.

SMART-SENSE UV254 M M

Real Tech provides our clients consultation from Real Tech to analyze their site specific data for custom configuration of the alarms standard on all M series instruments.

SMART-SENSE SPECTRUM GL PL

Real Tech offers consultation to characterize targeted contaminants in complex water sources. Real Tech analyzes the site specific spectral fingerprint accounting for background interference to configure the standard alarms on all GL and PL Series instruments.

SMART-SENSE I M M GL PL

This software option goes beyond the standard absorbance measurement with custom calibration by Real Tech for single parameter output (TOC, DOC, COD, BOD NO₃ or NO₂) accounting for common interferences. Laboratory results required.

SMART-SENSE II GL PL

The most advanced software package provides the most information in one software package. With the ability to measure multiple parameters simultaneously (TOC, DOC, COD, BOD, BTX, Color, NO₃, NO₂ and/or Turbidity), Real Tech provides custom site specific calibration accounting for common interferences. Laboratory results required.

CLEANING SYSTEMS

Water quality instruments are prone to fouling over time and require cleaning for ongoing performance and accuracy in measurement. Real Tech's various cleaning system options make the task simple with minimal operator intervention.

REAL CLEAN SYSTEMS M GL PL

Real Tech's automatic chemical cleaning systems are designed for the bypass style continuous analyzers. Powered and programmed through the analyzer, cleaning cycles can easily be configured to client's specific cleaning frequency requirements.

REAL AIR CLEAN SYSTEMS M

Real Tech's automatic pressurized air cleaning systems offer the most effective cleaning for its submersible probes. Unlike traditional wiper systems, air cleaning has no submersible replaceable or moving parts lowering maintenance and replacement costs.

“ THE REAL TECH 254 MONITOR IS AN INVALUABLE WATER QUALITY MONITORING TOOL BOTH IN THE TREATMENT PLANT AND THE DISTRIBUTION SYSTEM. WE ARE ABLE TO MONITOR THE REMOVAL OF ORGANIC MATTER THROUGHOUT OUR TREATMENT PLANT AND MONITOR FOR ORGANIC CONTAMINANTS IN OUR DISTRIBUTION SYSTEM. IT IS BOTH USER FRIENDLY AND NEARLY MAINTENANCE FREE ”

CONNIE SCHREPPPEL, DIRECTOR OF WATER QUALITY
MOHAWK VALLEY WATER AUTHORITY

**PRACTICAL.
ACCURATE.
AFFORDABLE.**

REALTECH
INC.

REALTECH
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SHINING LIGHT ON WATER QUALITY

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