

## Real-time Process and Laboratory Analyzers for Gas, Water and Liquid Applications

### Mass Spectrometers & Laser Spectroscopy Analyzers



### Fermentation & Bioreactor Control

#### Applications:

- Fermenter bioreactor off-gas composition analysis
- Fast and accurate analysis for control parameters such as:
  - Oxygen Uptake Rate (OUR)
  - Carbon Dioxide Evolution Rate (CER)
  - Respiratory Quotient (RQ) and fermentation end point
- Continuous monitoring to improve yield / quality and reduce waste - single species or multi-component analysis (e.g. CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, H<sub>2</sub>O, CO, H<sub>2</sub>, He, hydrocarbons, alcohols, aldehydes, sulfurs)



Real-Time, Multi-Stream Mass Spectrometer Gas Analyzer for Accurate OUR, CER and RQ  
**MGA 1200CS™**



Benchtop Mass Spectrometer for Real-Time Multi-Stream, Bioreactor Control  
**MAX300-LG™**



CRDS Single-Species, Trace Gas Analyzer for ppb-Level of H<sub>2</sub>O, CH<sub>4</sub>, CO, CO<sub>2</sub>, Detection  
**Spark™**

### Water Quality Analyzers



### Pure Water & Wastewater

#### Applications:

- Irrigation, cleaning and sanitation, product hydration, water recycle monitoring
- Water influent and effluent discharge control
- Process control, high purity, oil in water, cooling water, condensate return, water-steam cycles, boiler feed water, and environmental compliance
- Monitor Total Organic Carbon (TOC) in water



TOC Water Analyzer for Harsh Wastewater Applications  
**QuickTOCultra™**



TOC Water Analyzer for Clean Water Applications  
**QuickTOCuvII™**



TOC Water Analyzer for Municipal and Cooling Water Applications  
**QuickTOCeco™**



COD Water Analyzer for Laboratories  
**QuickTOClab™**

## Electrochemical Sensors & Laser Spectroscopy Analyzers



## Instrument Air & Dryers

### Applications:

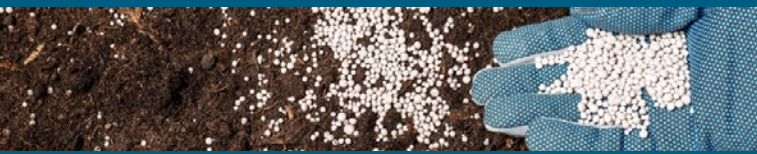
- Moisture control in maturation and ripening, packaging, storage, and transportation of food and stimulants
- Continuous moisture analysis in instrument air and dryers, and portable spot checking
- Trace moisture in clean dry air, ppb to %



Aluminum Oxide Dew Point Meters and Transmitters with Hyper-Thin-Film Technology for Portable/Fixed/Loop-Powered Applications  
**XDT™ | XPDM™ | LPDT™ | LPDT2™**

CRDS Analyzer for UHP Moisture in Air  
**Spark™**

## Heating Value, Electrochemical & Spectroscopy Analyzers



## Ammonia Fertilizer Process Control

### Applications:

- Real-time ammonia process control for optimized steam control and tighter H:N ratio at the converter for increased efficiency and higher yields
- Gas analyzers for H<sub>2</sub>O, CO, CO<sub>2</sub>, H<sub>2</sub>, N<sub>2</sub>, CH<sub>4</sub>, H<sub>2</sub>S, hydrocarbons, BTU, Wobbe, CARI and Density
- Safe, automated, inline analysis of nitrous acid and urea in liquid at ammonia fertilizer plants



Benchtop Mass Spectrometers for Real-Time, ppb-level, Multi-Impurity Analysis  
**MAX300-LG™**

Industrial Mass Spectrometers for Real-Time, Multi-Stream Process Control  
**MAX300-RTG™ 2.0**

Injection-Style Heating Value Analyzer for Zero Hydrocarbon Emissions for BTU and Flare Control  
**9800™ Calorimeter**

Portable and Fixed Aluminum Oxide Dew Point Meters  
**XPDM™**



Real-time Cavity Ring Down Spectroscopy (CRDS) Impurity Analyzers for H<sub>2</sub>O, CO, CH<sub>4</sub> and CO<sub>2</sub>  
**CO-rekt™ and Prismatic™**



Dual Beam Photometer for Continuous PAT Monitoring  
**ClearView db®**

## Photometers & Probes for H<sub>2</sub>O<sub>2</sub> and H<sub>2</sub>O



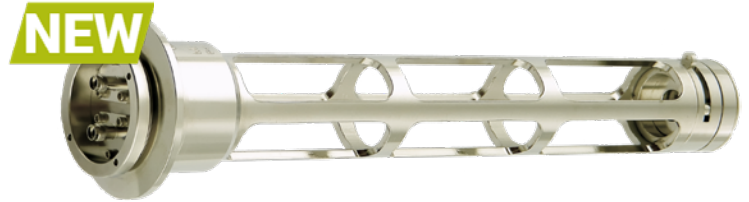
## Sterilization & Virus Deactivation

### Applications:

- Real-time sterilant gas monitoring
- Near-infrared (NIR) filter photometer for H<sub>2</sub>O<sub>2</sub> and H<sub>2</sub>O vapor mixtures
- H<sub>2</sub>O<sub>2</sub> and H<sub>2</sub>O under ambient or vacuum conditions
- Optical RH and relative saturation measurements
- NOx and EtO sterilant gas monitoring



Dual Beam Photometer for Real-Time Hydrogen Peroxide Vapor (HPV) Sterilant Gas Monitoring  
**ClearView db® Hydrogen Peroxide Vapor HPV™**



Vapor Probe for H<sub>2</sub>O<sub>2</sub> Analyzer System, Suitable for Vacuum and Positive Pressure (up to 2 atm)  
**G-SST™ Vapor Probe**

## Spectroscopy, Electrochemical & Water Quality Analyzers



## Environmental, Health & Safety (EHS)

### Applications:

- Oxygen levels in grain elevators, silos, storage and food processing plants
- Triazines and precursors in agricultural runoff
- Continuous Emissions Monitoring (CEM) from agricultural operations
- Greenhouse gas (GHG) emissions from landfills, processing plants and agricultural facilities
- Air and fence-line monitoring
- Wastewater discharge compliance
- Trace gas analyzers for H<sub>2</sub>O, O<sub>2</sub>, H<sub>2</sub>, CH<sub>4</sub>, NH<sub>3</sub>, CO, CO<sub>2</sub>, N<sub>2</sub>, Ar, He and hydrocarbons



Percent and Trace Oxygen Analyzers, and Oxygen Deficiency Safety Monitors  
**Series 2000™ and ZRO2000™**



Dual Beam Photometer for Real-Time Triazine Content in Runoff  
**ClearView db®**



UV-VIS Process Analyzer for Chlorine and Phosgene Gas  
**M508plus™**



CRDS Analyzer for the Detection and Continuous Monitoring of Methane and Greenhouse Gases (GHG)  
**T-I Max AIR™ CH<sub>4</sub> and CO<sub>2</sub>**



Real-time Air Mass Spectrometer for Environmental Health and Safety  
**MAX300-AIR™**



FTIR Environmental Vapor Monitoring Analyzer  
**ANALECT EVM™**



TOC Water Analyzers for Pure and Process Water Applications for Laboratories  
**QuickTOCpurity™**



COD Water Analyzer for Laboratories  
**QuickTOClab™**



## Controlled Atmosphere & Glovebox

### Applications:

- Real-time, in situ glovebox and incubation monitoring
- Ideal for vessel and climatic chamber monitoring and validation
- ppb to 100% H<sub>2</sub>O and O<sub>2</sub> (aerobic or anaerobic activity), relative humidity and dew point, temperature and compositional gas analysis
- Glovebox moisture, temperature and dew point sensor validation



Portable and Fixed Trace-to-Percent Oxygen Monitors  
**Series 3520™** and **OXY-SEN™**



Aluminum Oxide Dew Point Meters and Transmitters with Hyper-Thin-Film Technology for Portable/Fixed/Loop-Powered Applications  
**XDT™** | **XPDM™** | **LPDT™** | **LPDT2™**



CRDS Trace Gas Analyzer for ppb-Level Detection of H<sub>2</sub>O, CH<sub>4</sub>, CO, CO<sub>2</sub> and C<sub>2</sub>H<sub>2</sub>  
**Spark™**



Laboratory Mass Spectrometer for Real-Time ppb-Level to 100% Compositional Analysis of Glovebox Gases  
**MAX300-LG™**



Benchtop Mass Spectrometer for Real-Time ppb-Level to 100% Catalysis, Reaction Monitoring, and Environmental Research  
**MAX300-CAT™**



Chilled Mirror Dew Point Hygrometer with Measuring Head for Temperature and RH Measurements  
**973 Model™**

For a complete range of products, applications, systems, and service options, please contact us at: [info@process-insights.com](mailto:info@process-insights.com)

For a complete list of sales & manufacturing sites, please visit: <https://www.process-insights.com/about-us/locations/>

REVOLUTIONIZING MEASUREMENT

# EVERYWHERE