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

**Mass Spectrometers & Laser Spectroscopy Analyzers**

**Fermentation & Bioreactor Control**

- **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 H₂O, CH₄, CO, CO₂, Detection**
  - **Spark™**

**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. CO₂, O₂, N₂, Ar, H₂O, CO, H₂, He, hydrocarbons, alcohols, aldehydes, sulfurs)

**Water Quality Analyzers**

**Pure Water & Wastewater**

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

- **TOC Water Analyzer for Clean Water Applications**
  - **QuickTOCuv™**

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

- **COD Water Analyzer for Laboratories**
  - **QuickTOClab™**

**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
**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 %

**Electrochemical Sensors & Laser 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 H₂O, CO, CO₂, H₂, N₂, CH₄, H₂S, hydrocarbons, BTU, Wobbe, CARI and Density
- Safe, automated, inline analysis of nitrous acid and urea in liquid at ammonia fertilizer plants

**Heating Value, Electrochemical & Spectroscopy Analyzers**

**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™**

**Benchtop Mass Spectrometers**

- 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 H₂O, CO, CH₄ and CO₂**

- CO-rekt™ and Prismatic™

**Dual Beam Photometer for Continuous PAT Monitoring**

- ClearView db®
**Photometers & Probes for H₂O₂ and H₂O**

**Sterilization & Virus Deactivation**

- **Applications:**
  - Real-time sterilant gas monitoring
  - Near-infrared (NIR) filter photometer for H₂O₂ and H₂O vapor mixtures
  - H₂O₂ and H₂O under ambient or vacuum conditions
  - Optical RH and relative saturation measurements
  - NOx and EtO sterilant gas monitoring

**NEW**

Dual Beam Photometer for Real-Time Hydrogen Peroxide Vapor (HPV) Sterilant Gas Monitoring

ClearView db® Hydrogen Peroxide Vapor HPV™

**NEW**

Vapor Probe for H₂O₂ 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 fenceline monitoring
  - Wastewater discharge compliance
  - Trace gas analyzers for H₂O, O₂, H₂, CH₄, NH₃, CO, CO₂, N₂, Ar, He and hydrocarbons

**NEW**

Percent and Trace Oxygen Analyzers, and Oxygen Deficiency Safety Monitors

Series 2000™ and ZRO2000™

**NEW**

Dual Beam Photometer for Real-Time Triazine Content in Runoff

ClearView db®

**NEW**

UV-VIS Process Analyzer for Chlorine and Phosgene Gas

M508plus™

**NEW**

CRDS Analyzer for the Detection and Continuous Monitoring of Methane and Greenhouse Gases (GHG)

T-I Max AIR™ CH₄ and CO₂

**NEW**

Real-time Air Mass Spectrometer for Environmental Health and Safety

MAX300-AIR™

**NEW**

FTIR Environmental Vapor Monitoring Analyzer

ANALECT EVM™

**NEW**

TOC Water Analyzers for Pure and Process Water Applications for Laboratories

QuickTOCpurity™

**NEW**

COD Water Analyzer for Laboratories

QuickTOClab™
**Applications:**
- Real-time, in situ glovebox and incubation monitoring
- Ideal for vessel and climatic chamber monitoring and validation
- ppb to 100% H₂O and O₂ (aerobic or anaerobic activity), relative humidity and dew point, temperature and compositional gas analysis
- Glovebox moisture, temperature and dew point sensor validation

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

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

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**Spectrometers, Electrochemical & Chilled Mirror Analyzers**

**Controlled Atmosphere & Glovebox**