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TECHNOLOGY GROUP

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so your equipment works exactly as you specify.

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Expert team | Trust guarantee | 100% satisfaction

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Find the *LT Industries Quantum 1200 Plus* at our website: ***Click HERE***

THE QUANTUM 1200 PROCESS ANALYZER SERIES

Lighting the way to a new world of improved production



LT INDUSTRIES, INC.
Light Technology At Work.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Real Time, Non-Destructive, Multiconstituent Process Measurements for Control.

THE COMPANY.

LT Industries is a major worldwide supplier of high quality and performance Near Infrared technology for laboratory, at-line and on-line applications throughout industry. LT Industries' reliable and rugged products upon installation have saved their client end-users millions of dollars in improved product quality and yield. The integrated



approach of systems and support has allowed LT Industries strong stable growth. Globally, LT Industries is recognized as the technological leader in this field.

The key to LT Industries' success is control of all technical developments, coupled with exemplary technical service and support of each system, whether the installation is 10 miles or 10,000 miles from their headquarters.

The technological response and ability to deliver both standard and customized products within a project's time frame has enabled LT Industries to provide strong technical based solutions to each of their client's needs.

At L T Industries, the strength of success is much more than reliable and high performance products; our strongest asset is the team of specialists who develop and support each of your applications. It is this team that has lead to our success and growth for today and tomorrow.

THE TECHNOLOGY.

LT Industries has developed Near Infrared (NIR) analysis technology for stable, reliable and accurate process monitoring in a variety of industrial applications. The Quantum 1200 Process Analyzer Series is comprised of the rugged, rapid scanning Quantum 2000 and 1200! Systems which were developed for both Pilot Plant and dedicated stand -alone installations in closed-loop-control of your manufacturing processes. Using rugged, proven technology,

LT Industries' systems enhance quality control, increase yield and reduce waste by providing real-time analysis.

The sampling process is non -destructive and non -extractive, involving none of the sample preparation required by other testing technologies.

LT Industries' Quantum 1200 Process Analyzers provide continuous multiple analyses in *real time.* These analyses have proven to be as accurate as traditional lab testing for liquids, powders, solids, slurries, pastes, emulsions and/or suspensions. Our systems deliver the real time data out- put that has made LT Industries a recognized NIR leader in *process measurement for control.*

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The Measurements.



Petro Chemicals and Fine Chemicals
Octane number (RON and MON), oxygenates, base hydrocarbon ID, quantification of blends, aromatics and long chain aliphatics, ligands, Reid Vapor Pressure, boiling points, other physical properties of feedstocks, intermediate and final products



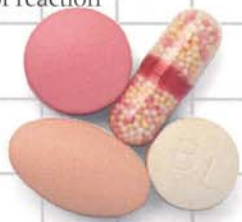
Polymers
Quantification of: extrusion matrices, co-extruded systems, blend determination, molecular weight, additives, residual monomer, free radical and binding radical concentration, active resin determination, hydroxyl number determination, moisture, kinetic studies, extent of reaction



Food and Beverages
Sugars, sweeteners, syrups, alcohols, fermentation processes, protein, fat, starch, moisture, fiber content, cheese, pasta, cereals, peanuts, fruits, vegetables, frozen and canned goods, flavoring, etc.



Pulp and Paper
Moisture, lignin, texture,coat-weight, thickness, rag content, kappa number, BTU content of black liquor



Pharmaceuticals
Active determination, dissolution, binder action, moisture, shelf-life, coatings, particle size, filter break-through, incoming raw material inspection



Adhesives
Residual solvent, cure, coat, weight, moisture, tack, silicone release, permeability



Soaps and Detergents
Surfactant, builder and phosphate quantification, biological active determination, other active ingredient analyses, moisture



Fibers and Textiles
Fiber identification, melting point determination, blend determination, finishing oils, dyeability, moisture, heat set



Tobacco
Nicotine, menthol, sugars, tobacco grade determination, casing

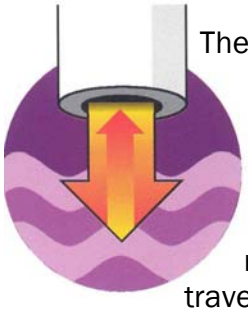


Coatings
Multilayer analysis, paints, protective coatings

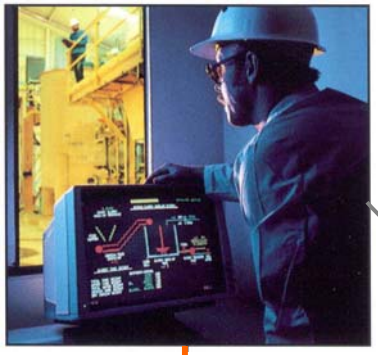
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Closing the loop with the Quantum Process Analyzer Series

The methodology.



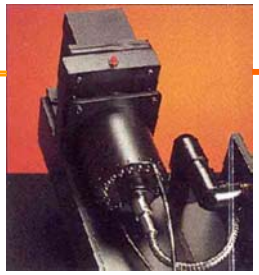
The Quantum 1200 Process Analyzer Series combines analytical power and intelligence with ease of use in an integrated systems package. A predispersed, monochromatic beam of light travels through the patented harmonic drive grating mechanism, where is it separated into discrete wavelengths and sent through a fiber optic link to illuminate the sample. The light transmitted back through the fiber optic link is converted into an electrical signal, which is compared by the microprocessor to the calibrated responses in memory. The data output results of this comparison are then used for process control.

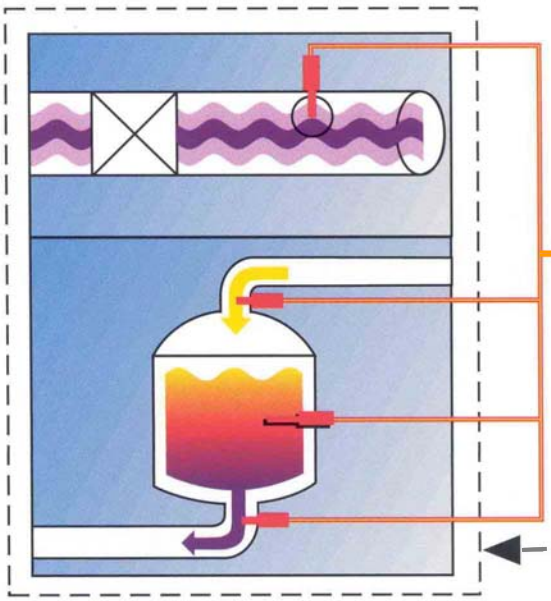


QUANTUM 2000 ANALYZER



FIBER OPTIC MULTIPLEXER





CONTROL SIGNAL

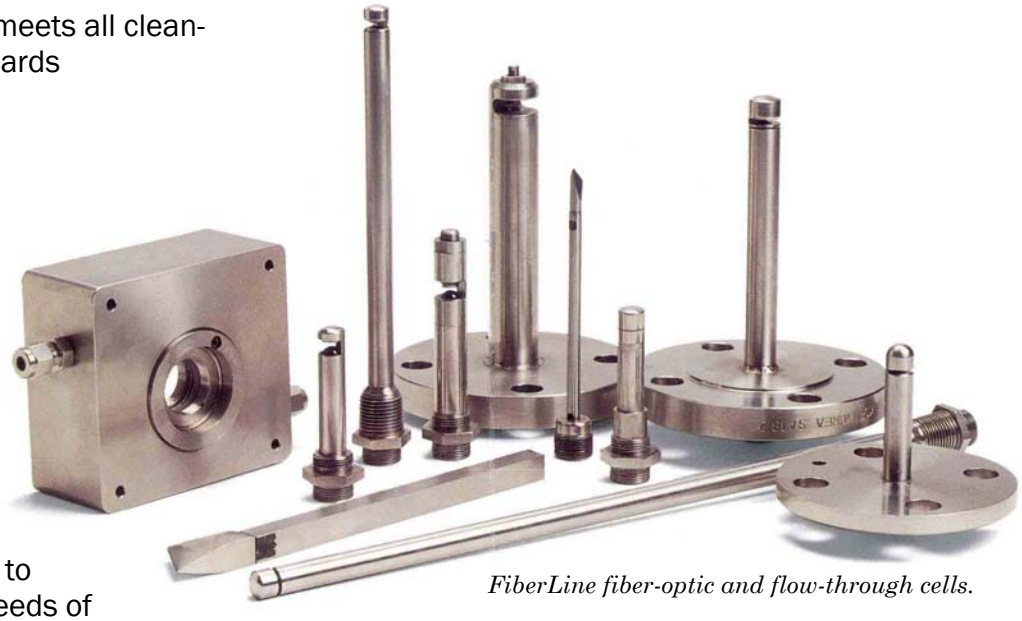
PROCESS

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Multimode fiber optic sampling and accessories.

Sampling by the quantum 1200 Process Analyzer Series is done with a fiber optic probe inserted into the process stream. Probes developed by LT Industries for continuous process applications meets all clean-in-process (CIP) standards

The Quantum 1200 Process Analyzer Series is supported by the full line of FiberLine NIR probes, flow-through cells, fiber optics and other sampling accessories. LT Industries will also design custom sampling accessories to answer the specific needs of each of your applications including hazardous environments.



FiberLine fiber-optic and flow-through cells.

The quantum 1200 Process Analyzer Series is capable of multiplexing for multiple sampling points, and can be programmed to analyzer multi-constituents, reactions and/or processes.

The Team.

LT Industries has become the leader in process Near Infrared analyzers through our proactive team approach in the development of new applications across all process industries worldwide.

Through our FAST program (Feasibility, Applications and support team), we have sent our factory-training specialists onsite to develop and customize systems that fulfill specific needs. LT Industries delivers applications and high performance products that produce results and cost saving for our clients.

In the development of each new application the following are performed:

- Application definition
- Application feasibility
- System definition
- Software
- Sampling
- Installation
- Training
- Service

Features & Benefits

Real Time Multi-Constituent Process Analyzers

Measures many process variables simultaneously, over 10 constituents in the same stream.

Multipoint, Fiber Optic Multiplexing Capability

Multipoint sampling and/or multiple application capabilities are supported up to 20 stations.

Communications

Multi-channel digital or analog outputs are available for tie-in to your host mainframe computer of data highway.

Shock and Vibration Free

A patented, harmonic oscillating drive mechanism filters out all environmental shock and vibration.

Flexible and Powerful Chemometrics and Transfer Software.

LT Industries' software has been engineered with a user- friendly interface. Whether sampling is performed at one or several points, our software will accommodate all of your calibration requirements with field proven programs including:

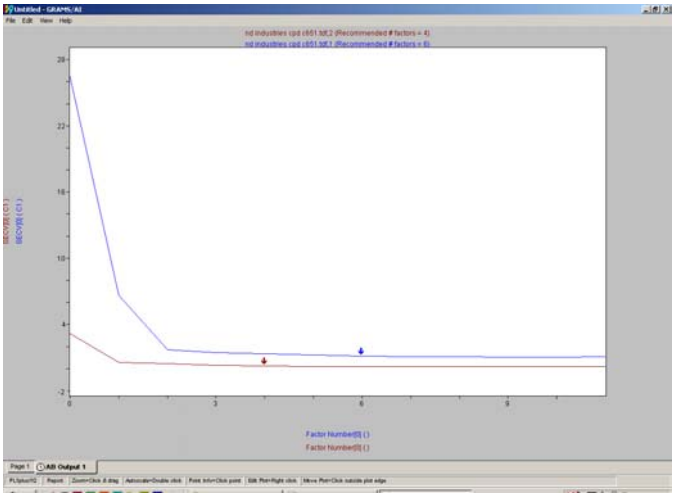
Data Acquisition -reliable data collection, flexibility in file and sample control, constituent value editor. Averages and ratios multiple scans.

Graphics - high resolution color graphics with multiple graph display. Complete flexibility in examination of ranges, determination of points, and text insertion. Output compatible with graphics printers and plotters.

Alarms, Set Points, SPC -interface is standard.

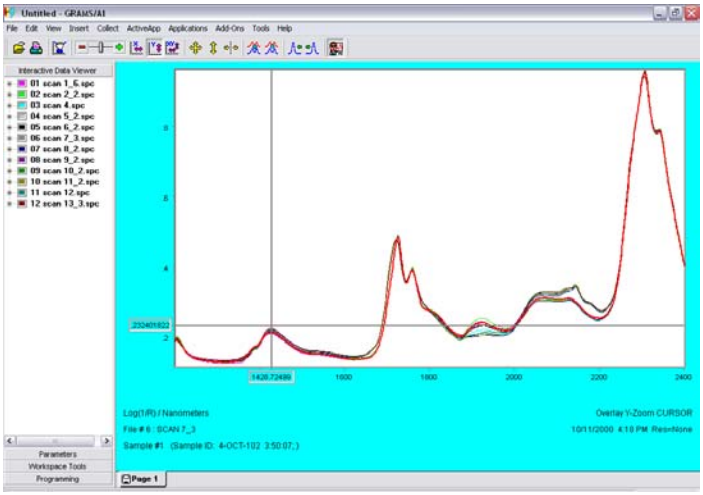
Security -software is available for end-user security and lockout.

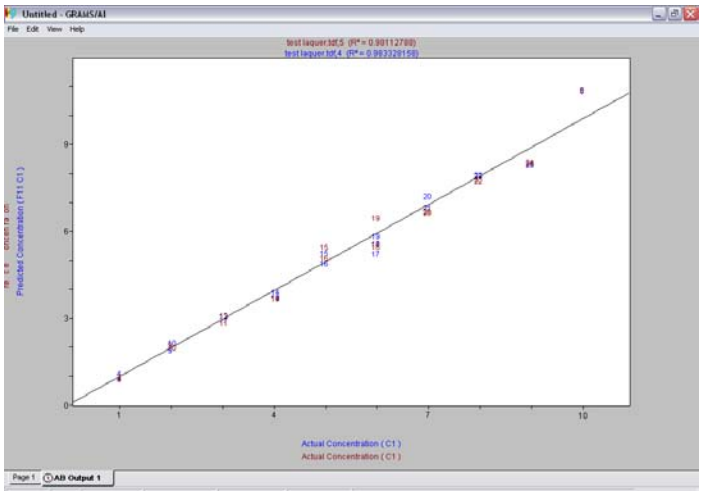
Modeling -complete multivariate calibration packages are available. Quantitative packages include fan-out regression analysis and multivariate linear regression, local minimal multiple model generation interfacing with high order mathematical modeling, such as Grams AI NIR Package including Principal Component Regression (PCR), Partial Least Squares (PLS) for complete calibration, validation



and predictive results. Our other packages offer Multi-Linear Regression (MLR) and Neural Net. Qualitative packages, including raw materials inspection (accept/reject), and brand identification, real time discriminate and factor analysis are standard.

Diagnostics -a complete comprehensive system check-out package is standard with the Quantum 2000 and 12001 Systems. Over 120 system check -out procedures are completed during initialization, with an additional 25 checks automatically run over each scan. Further capabilities are exhibited through auto-initialization routines on power-up, and error indicators to output devices. Errors can be user activated in either closed or open modes.

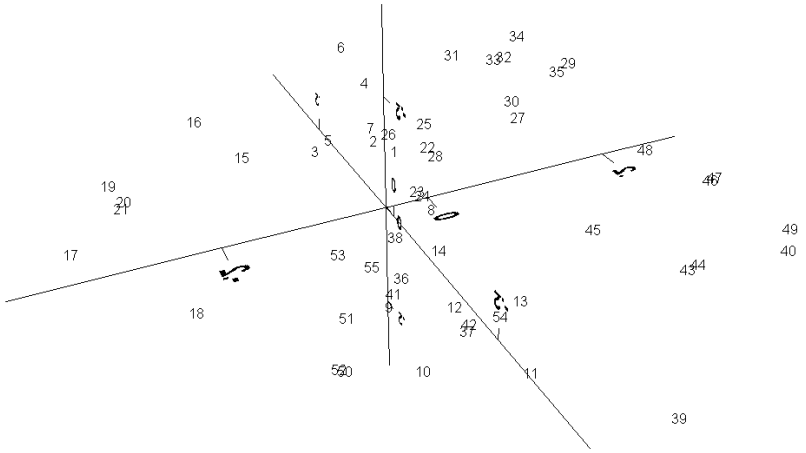




Custom Programs - Custom software can be easily interfaced to the Grams or Analyzer format, because programs are activated by the powerfully flexible National Instruments tools, macros or Windows. Special package interfaces have been designed by LT Industries to suit specific information needs as well as standard DCS interface and automation software.

Runtime Software Capabilities – LT Industries runtime software provides customization and 1/0 functionality through callable modules, and allows complete flexibility of output to screen, printer, network, COM ports, or intranet for host computer processing as fast as 2.5 scans per second. Industry standard D/A ports are also supported. Outputs from the Quantum 2000 and 1200I Systems can be used in conjunction with many commercially available PC packages.

Universal Design and Calibration Transparency - calibrations for a given application can be transferred from the development lab to field installations, plant-wide or worldwide, because LT Industries' Process Analyzer Series uses the same optical bench as LT Industries' Laboratory System. Calibration transfers are enhanced through LT



Utility Programs -status and content of data files are provided, and processing history is included at all levels. The ability to port in part to other commercially available workstation packages is also available.

Industries' chemometrics based TRANS Software Module that qualifies system response, as well as changes in calibration.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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