

# Parafuel™ Ethanol Analyzer



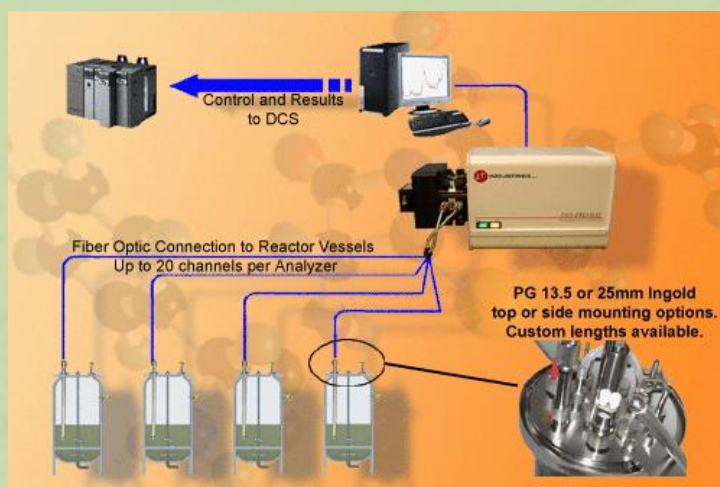
## Ethanol Properties Measured Including ASTM D4806 Properties

Acetic Acid  
Ammonia  
Arabinose  
Brix  
Cellulose  
Denaturant  
Dextrins  
Ethanol  
Galactose  
Glucan  
Glucose  
Glycerol  
Holocellulose  
Lactic acid  
Lignin  
Lignocellulose separation  
Maltose  
Moisture  
Pentosans  
pH  
Solids  
Soluble Fractions  
Xylan  
Xylose

ParaFuel™ Analyzers from LT Industries are small, rugged analyzers designed for use in ethanol plants & laboratories. ParaFuel™ Systems can measure several key properties of ethanol in any production process. Whatever the analytical need – finished product qualification, process measurements, or incoming raw material properties – the ParaFuel™ can do the job. You can expect low costs, fast results, and minimal operator training with each system.

## A New Level of Quality Measurement

The ParaFuel™ analyzer can measure key chemical and physical properties rapidly and accurately. Reduce your lab expenses and testing times compared to traditional assays. Measurements are directly correlated to ASTM and EN tests. Simply dip the probe into a sample and press “Enter” on the controlling computer. The ParaFuel™ provides your analytical results in seconds. The test procedure allows for greater experimental repeatability—and it does not require special operator skills.



## Real Time Process Analytics

Parafuel™ Process Systems can measure key chemical and physical properties rapidly and accurately. Monitor changing process conditions in real time and adjust as necessary. With the capability to measure 20 points with a single analyzer, gain knowledge of the **whole** process. Validate quality and performance at all stages—raw materials, intermediaries and final product. Design quality *into* your system.

# A Complete Ethanol Quality Solution

## Complete Process Quality Solution

The ParaFuel™ Analyzer provides an unparalleled value with its ability to measure feedstock, process and final product quality parameters. Monitor the incoming feedstock for parameters such as:

Moisture	Starch	Protein	Oil
Fiber	Ash	Lignin	Cellulose

Whether you are making ethanol from traditional sources or cellulosic biomass, the Analyzer can meet the entirety of your measurement needs.

## Measuring Tools for all Conditions

The ParaFuel™ Analyzer comes complete with probes and flow cells built to suit your measurement needs. They are designed for maximum chemical resistance and are available in a variety of configurations depending on your process measurement requirements. Raw material sampling stations are also offered. Whatever your measurement needs, the ParaFuel has tools designed to meet your requirements.

## Reliability in Critical Applications

With a high mean time between failures (MTBF) and the ability to be remotely serviced by a team of experts, the ParaFuel™ will be a long-lasting part of your process. The system can be placed in hot, cold, dusty, wet or hazardous areas with NEMA or IP enclosures rated to withstand your environment.

## Additional Features:

- **Multiplexer** – Allows for multipoint measurement with one analyzer. Up to 20 channels allows for unsurpassed value measurement point.
- **Control System Integration** — With LTBUS Software, have your analyzer communicate directly with a PLC, DCS or other control systems.
- **On-site application** — Experts will visit your facility, commission the instrument, develop the analytical model and train your personnel.
- **Continuing Support** – Model development and Instrument Maintenance packages can ensure you get the most out of your equipment.

## Features

- Designed for 24-hour continuous operation
- Measure up to 20 samples simultaneously
- Probes and flow cells for continuous processes
- Automation and communication software with easy integration into existing control systems
- Fully automated user interface
- Remote diagnostic capability
- Protection against dust, water, hot or cold temperatures

## Benefits

- Fast, non-destructive measurement
- Reduce in house and outside laboratory expenses
- Improved product quality
- Validate incoming feedstocks
- Minimal operator training
- Monitor reactions in real time
- Real-time, automated results on a simple interface
- Utilize the knowledge of a company with over 30 years experience developing and applying NIR analyzers
- Rapid return on investment

## Contact

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