

LT Industries ParaFuel™ NIR Fuel Ethanol Analyzer



ParaFuel™ systems from LT Industries help you get quick and easy measurements of your ASTM D 4806 Fuel Ethanol Properties. LT-NIR analysis of Ethanol takes only seconds. Whether you need an online EtOH analyzer, or a desktop analyzer, LT Industries has the solution. Below are some of the properties the ParaFuel and PetroScan systems can do for you in the lab and in-process.

Easy to use, easy to own

Make fussy sampling procedures a thing of the past. Simply dip the probe into a sample and hit “Enter” on the controlling computer. The **ParaFuel** provides your analytical results in seconds.

ParaFuel’s full networking capability allows data to be accessed wherever needed. **OpCon-II** user interface provides customized screens, result reporting, and data-logging. **LTBus** software allows the system to interface with plant DCS, PLC, or other computer systems using Modbus, 4-20 mA, and other protocols.

Available Options:

- **On-Line Integration** – With sampling points directly in the process get real time automated results. Use them to control your process to balance other inputs, insure complete reactions, and increase yield of ASTM approved product.
- **Multiplexer** – Allows for multipoint measurement with one analyzer. Up to 20 channels allows for unsurpassed value measurement point.
- **On-site application** — LT Industries personnel will visit your facility, commission the instrument, develop the analytical model and train your personnel.

Property	ASTM Test Method	Units	Specification
Ethanol volume %, min	D 5501	% Volume	92.10%
Methanol, volume %. max		% Volume	0.50%
Solvent-washed gum, mg/100 ml max	D 381	mg/100 ml	5mg
Water content, volume %, max	E 203	% Volume	1%
Denaturant content, volume %, min		% Volume	1.96%
Denaturant content, volume %, max		% Volume	4.76%
pHe	D 6423		6.5-9.0

Measurements in Ethanol Using the ParaFuel™ Ethanol Analyzer

The ParaFuel Ethanol analyzers can also do measurement of raw materials for ethanol production, as well as analysis of ethanol process parameters for greater process control, higher efficiency, throughput, and profitability.

All these properties and more can be measured within seconds in the lab with a ParaFuel Ethanol Analyzer, or online using the PetroScan.

Ethanol Raw material Analysis	Ethanol Process Parameters
Moisture	Ethanol
Starch	Glucose
Protein	Maltose
Oil	Lactic and Acetic Acid
Fiber	Glycerol
Ash	Brix
And More	Dextrins
	% solids in Syrup



Analyzer Specifications:

Reliability:	Designed for twenty-four hour operations without shut-down.
Spectral range:	1200 – 2400 nm (other ranges available from 400 – 2400 nm)
Scanning speed:	5 scans per second
Spectral addition:	Scans may be added under computer control
Measurement modes:	Reflectance, Transmittance, Transflectance
Data interval:	1 nm (1200 points over the spectral range)
Bandwidth:	10 nm
Photometric range:	5 Absorbance Units
Wavelength repeatability:	0.01 nm
Stray light:	0.1% or better
Light geometry:	Optimized for minimum specular reflectance and maximal S/N
Auxiliary port:	Computer controlled for alternative sampling
Possible signal output:	Multiple 4-20 mA, multiple voltages, MODBUS, and more
Power:	120V, 3.5 Amp, 60Hz or 220V, 1.8 Amp, 50 Hz
Power transients:	Filtered
Dimensions:	12" x 15" x 13" (HWD), 30.5 cm x 39.7 cm x 34.9 cm (HWD)