

## *Iso-Chem™*

### *NIR Materials Analysis System*

*Iso-Chem systems are portable NIR analyzers with remotely triggered testing probes. They are designed to provide confirmatory chemical analysis, in seconds, at-line.*

## A better raw material analyzer...

What does "better" mean? Stronger, faster, more reliable, compatible?

*Iso-Chem*, LT Industries' NIR chemical analysis system is all of those -- and it's built to provide the best price/performance value in the NIR field. *Iso-Chem* also meets the critical business tests of the increasingly vigorous chemical formulation world. It's small, fast and inexpensive -- and because raw material calibration libraries are often transferred from plant to plant, *Iso-Chem* also includes a patented system to assure seamless transfers!

## Benefit from a new generation...

The 500 industrial plants which use LTI NIR spectrometers have contributed to the elegance of the *Iso-Chem* design. Its features reflect their needs.

The scanner is many things, but it's not fussy. Temperature doesn't faze it, vibration doesn't bother it, the sample probe is both flexible and strong. Optical resolution is high, noise levels are low and internal wavelength standardization is frequent. We've designed the potential problems out so that you can add the time and cost savings of effective NIR spectroscopy into your chemical manufacturing operations.

## Features . . .

- Long, protected fiber optics
- Low noise fiber and probe
- Remote operation, on-the-spot answers
- Absolutely easy-to-use software
- Supports bar code input and output
- Standard remote diagnosis feature
- Low acquisition cost

## The Iso-Chem system includes . . .

- Full array of support hardware
- Rapid-scanning NIR monochromator with Built-in dynamic wavelength referencing system and intersystem calibration-match hardware.
- Ergonomically-designed intelligent test probe with remote scan and reference capability, remote sample status report and Bubble Shedding™ optics.
- Two-meter (nominal) jacketed fiber optic cable, five meter option
- Liquid reflectors for 1,5 & 10 mm paths
- Computer interface
- Spectralon® reflectance reference set
- Installation and on-site training

- Qualification installation guide
- Method development support
- Operation manual
- Full one year warranty

## Three-way price advantage...

*Iso-Chem* systems are very affordable. Compare its price and be pleasantly surprised. They are unrestricted -- all LTI sampling interfaces will couple to the monochromator. And, they are upwardly mobile. The scanner mechanics are completely process compatible.

## And a full line of accessories...

- Bar Code Reader and Printer Kit
- Alternative sampling probes.
- Extended Method & Training Services
- At-line Utility Cart
- Auto-and Rotary-Samplers
- Spectral Range Options

## Will it support my application?

The *Iso-Chem* system uses LTI's patented probe technology to assure the best possible results -- from diffusely-reflecting slurries or liquid materials. The system is free from interface limitations, so any of the LTI probes will work in conjunction with it -- and that includes both powder probes and high-temperature/high-pressure models. So, an *Iso-Chem* monitor system can adapt-- from passive materials in shipping containers through slurries to bench and pilot-scale reactors. It is a raw-materials analyzer which can do double or triple duty when required.

## What about support?

LTI is known for its FAST-team concept: a product manager and an application-science team help you through your initial proof-of-concept testing -- and then carry through to full commissioning. They form a team with you to be certain that your application is successful. And, LTI maintains complete support groups in North America and Europe.

## What else do I need?

The *Iso-Chem* system provides the scanner, probe and interface electronics. You can supply your own computer or we can pre-condition a computer for you.

To use the complete package in your chemical manufacturing operation, you will need to provide some means of moving the instrument to the chemical containers -- or move the containers. The fiber optic probe allows operator movement up to a nominal five meters. If you wish to move the instrument, use a laboratory or utility cart -- ours or yours -- with an upper shelf at nominal waist height. The computer can rest on a lower shelf. The cart can also be used to carry a bar-code reader and printer if required, as well as supplies for intersample cleaning.

## What about cleaning?

The remote sampling probe terminates in a polished, chemically passive stainless-steel tube with a sapphire window. When the sample material is powdery and not subject to electrostatic "cling", wiping three successive times with laboratory tissue will suffice. Some users vacuum the probe tip. Solvent rinsing is needed only when the test material adheres stubbornly to the metal tube.

## What to order...

***Iso-Chem System*** includes all of the items listed in the basic package description. Add options as you wish, procure a computer and prepare to enjoy fast, passive, precise chemical analysis right where you make your product!

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